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LINDENIA

ICONOGRAPHY

OF ORCHIDS

CONDUCTED BY

J. LINDEN, LUCIEN LINDEN and EM. RODIGAS.

VI.

1893.

Mo. Bot. Garden,
1895.

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PRINTED BY EUG. VANDERHAEGHEN.

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LINDENIA

ICONOGRAPHY

OF ORCHIDS

PART XXXI. AUGUST 1893.

LINDENIA

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CONDUCTED BY

J. LINDEN, LUCIEN LINDEN and EM. RODIGAS.

THE COLOURED PORTRAITS BY

P. DE PANNEMAEKER, A. GOOSSENS and J. GOFFART.

CONTENTS :

	Pages		Pages
Laelia purpurata Lindl. var. fastuosa Lind.	5	Masdevallia × Pourbaixii Hort.	9
Laelio-cattleya × eximia Hort.	7	Odontoglossum Thompsonianum Garnier .	11

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LAELIA PURPURATA LINDL. var. FASTUOSA

PL. CCCLXXXV.

LAELIA PURPURATA LINDL. var. FASTUOSA.

THE PURPLE-STAINED LAELIA, SUPERB VARIETY.

LAELIA. Vide *Lindenia,* Engl. ed., vol. I, p. 41.

Laelia purpurata. Vide *Lindenia,* Engl. ed., vol. I, p. 41.

Var. fastuosa. Varietas floribus roseis, petalis roseo-purpureo flammeis.

Var. fastuosa HORT., MORAN in *Journ. des Orch.,* IV, pp. 102, 103, fig. 57. — GOWER in *The Garden,* June 10th, 1893, p. 477.

Laelia purpurata is certainly one of the showiest and most popular of garden Orchids, and at the same time it is also very variable. The typical form has pure white sepals and petals with a purple lip, as was shown at t. 282 of this work. Two of its handsome varieties have also been figured, namely *var. alba*, at t. 283, and *var. rosea*, at t. 302. Many other brilliant forms have received distinctive varietal names, and among them the one to which the present plate is devoted.

Laelia purpurata var. fastuosa flowered in the collection of L'HORTICULTURE INTERNATIONALE in May last, when the accompanying plate was prepared. It is a very handsome form. The sepals and petals are broad and well formed, and of a bright rose tint, the latter being much darker in their upper half and along the centre and nerves. The well formed lip is deep crimson-maroon tipped with lilac, and the throat white. It is very distinct and handsome. The markings on the petals closely resemble those of the variety *discolor* (ROLFE in *Orchid Review*, I, p. 199), in which, however, the sepals are blush white, and the flower generally lighter in colour.

The principal variations to which this species is subject, and the varieties then in existence, were indicated in this work about two years ago, since which time some additions to the list have been made, as an enumeration of no less than twenty-eight varieties is given by Comte DE MORAN in the *Journal des Orchidées* for June 15th last, where indeed a flower of the present variety is figured.

It is certain that this handsome species and its varieties will continue to hold a position in the very front rank of cultivated Orchids for a long time to come.

R. A. ROLFE.

SOME USEFUL HINTS.

Aganisia coerulea is now in flower. It is a plant which must be syringed with caution, so as not to wet the flowers, which must be included among the most charming of Orchids. Their blue colour, analogous with that of *Vanda coerulea*, is exquisite, their form is nearly circular, and their arrangement in upright flexible racemes extremely graceful.

Aganisia coerulea is not difficult to cultivate, but it requires much heat and moisture.

It succeeds best on a block, because of its creeping rhizome, and should be fixed to the wood, so that its pseudobulbs may grow out and elevate themselves each year.

The plants should be cultivated in the warm or intermediate house, and by preference in a small low house, where the atmosphere is always charged with humidity. They should be syringed frequently, and in a warm season like the present one, at least once a day.

The flowers of *Aganisia coerulea* remain in good condition for a long time, if water be not allowed to touch them, and the flowering is renewed at different seasons of the year. It is one of the most beautiful species when cultivated near the glass.

—

It is not advisable in general to tear away the pellicle which covers the pseudobulbs of Cattleyas when they have become fully developed. Sometimes, however, these bracts become black and appear to decay, either because water has penetrated between them and the pseudobulbs, or the plants have not been sufficiently ventilated and exposed to the sun. In such cases it is advisable to split the bract throughout its entire length, so that the air may penetrate to the interior and arrest the decay; otherwise it may attack the pseudobulbs.

—

The best time to divide the plants is just before they begin to grow. At this period there is no danger of injuring the roots, as they are not now firmly fixed in the compost.

The plants which have been divided should be placed in a shady part of the house, which will favour the development of new roots, and prevent the plants from becoming shrivelled.

Water should be more sparingly given for some time, until they have commenced to grow and the young roots are formed.

—

It is also advisable to add that in dividing the plants, one or more eyes

(*To be continued on* p. 8)

LAELIO-CATTLEYA × EXIMIA HORT.

PL. CCCLXXXVI.

LAELIO-CATTLEYA × EXIMIA HORT.

THE DISTINGUISHED LAELIO-CATTLEYA.

LAELIO-CATTLEYA. Vide *Lindenia*, Engl. ed., vol. II, p. 25.
Laelio-cattleya × *eximia*. Hybrida inter *Cattleya Warneri* et *Laelia purpurata* artificiose producta.
Laelio-cattleya × *eximia* HORT., *Gard. Chron.*, 1890, i, p. 800. — ROLFE in *Journ. des Orch.*, I, p. 165.

This very beautiful hybrid was raised by Mr SEDEN, in the establishment of Messrs JAMES VEITCH and Sons, of Chelsea, between *Cattleya Warneri* and *Laelia purpurata*, the former being the seed parent. It flowered for the first time in 1890, and was exhibited at a meeting of the Royal Horticultural Society on June 24th. of that year, when it was awarded a First-class Certificate. It is specially interesting as the first hybrid obtained from *Cattleya Warneri*. The plant afterwards passed into the collection of Baron SCHRÖDER, of The Dell, Egham, and the annexed plate was prepared from materials kindly forwarded by him in June of the present year.

The flowers of this charming plant are large, well-formed, and of good substance. The sepals and the broad petals are of a beautiful rosy lilac, and the lip very large, and bearing a considerable resemblance to that of *C. Warneri* in shape, and somewhat intermediate between those of the two parents in colour. It is of a bright rose-purple, the front being of a deeper shade, like that of some of the varieties of *Laelia purpurata*, and the throat orange-yellow.

It is one of a series of very brilliant forms which have all been derived on the one hand from *Laelia purpurata*, either as the seed or pollen parent. With *Cattleya labiata* it yielded *Laelio-cattleya* × *bella;* with *Cattleya Mossiae* it yielded *Laelio-cattleya* × *Canhamiana;* and with *Cattleya Warscewiczii* it yielded *Laelio-cattleya* × *callistoglossa*. Thus we have four of the most beautiful hybrids in existence raised between *Laelia purpurata* and the Cattleyas of the labiata group, which facts should be very suggestive to those who are engaged in the fascinating work of raising new varieties from seed by artificial crossing.

R. A. ROLFE.

(Continued from page 6.)

should be left on each piece; also that the rhizome should be cut, a certain distance from the growths, with a sharp penknife rather than a pair of shears, so as not to injure it.

—

It is perhaps useful to point out to amateurs who send away their flowering plants, to exhibitions for example, the precautions which are necessary in these cases.

It is the inflorescence especially which, as the most delicate part, must be protected. Sticks should be inserted in the compost, and round them should be wrapped some soft tissue paper to prevent contact with their rough surface, and to these the flowering stems should be tied with ligatures of raphia.

For those with arching racemes which are too robust to be straightened, as those of Cymbidium, for example, it is sufficient to support two or three points to the same number of sticks, placed at intervals from each other.

The flowers should be further wrapped in pieces of soft tissue paper fastened by their two ends to the sticks. They should also be wrapped in wadding when they are very delicate.

When there are many plants, each should be wrapped in paper, and arranged in a large basket, the intervals being filled with shavings or other matter intended to keep them in their places. Round the edges of the basket four or five flexible laths or stakes should be placed, which can be brought together and tied at their summit. In this way a sort of protecting cage is formed round the plants.

(*Journal des Orchidées*, IV, p. 126.)

MASDEVALLIA × POURBAIXII HORT.

P. De Pannemacker delin.

PL. CCCLXXXVII.

MASDEVALLIA × POURBAIXII HORT.

M. EUG. POURBAIX'S MASDEVALLIA.

MASDEVALLIA. Vide *Lindenia*, Engl. ed., vol. II, p. 17.
Masdevallia × *Pourbaixii*. Hybrida inter *Masdevallia Veitchiana* ♀ et *M. Shuttleworthii* ♂ producta.

Hybrid Masdevallias are not yet very numerous, although they are not more difficult to obtain than in other genera. They have also the advantage of being easy of culture and of rapid growth, and the wonder is that they have not been raised in larger numbers. One reason probably is that the genus Masdevallia is not one which finds great favour among amateurs of Orchids. Artificial hybrids have probably helped to restore to it a certain amount of popularity, if not to the high rank which it occupied a few years ago, by giving rise to new forms and more varied colours. The only defect of the genus may perhaps by this means be removed, as for a long time the explorations of collectors have not resulted in many new acquisitions in the genus.

Masdevallia × *Pourbaixii* was obtained by M. Eugène Pourbaix, of Mons, by crossing *M. Veitchiana* with the pollen of *M. Shuttleworthii*. The cross was effected during the summer of 1888, and the seeds matured in about eight months, and were sown in March of the following year. It flowered for the first time just four years later, in March, 1893.

The new hybrid is quite intermediate between its two parents. In habit it most resembles the pollen parent, but the flower, on the contrary, presents a perfect combination of the characters of the two species interested. In size, it is about intermediate; in shape, it most resembles *M. Shuttleworthii*, but it is a little less open and more elongated; in colour, it approaches the superb vermillon-scarlet of *M. Veitchiana*, which will always make this beautiful species sought for in artificial crossing; still, as might easily be forseen, we find also the presence of a more sombre tint, a dull orange-yellow, covered with a multitude of little brownish red dots. We observe also some lines of a darker tint.

This hybrid is dedicated to M. Eug. Pourbaix, its raiser, and this dedication is justified by the fact that M. Pourbaix has the merit of producing the first hybrid which has appeared in Belgium, and probably on the continent, so far as we are able to ascertain.

Masdevallia × *Pourbaixii*, only produced a single bloom on the occasion of its first flowering, which is not suprising, as the plant is still very small. We

may hope that it will ultimately prove as floriferous as the pollen parent, for it is a well-known fact that hybrids in general flower more easily and in greater abundance than the species from which they are derived. On this account, and by reason of the beauty of its color, it is probable that the present hybrid will prove very serviceable.

L. L.

ODONTOGLOSSUM THOMPSONIANUM GARNIER

PL. CCCLXXXVIII.

ODONTOGLOSSUM THOMPSONIANUM GARNIER.

Mr W. THOMPSON'S ODONTOGLOSSUM.

ODONTOGLOSSUM. Vide *Lindenia*, Engl. ed., vol. I, p. 19.
Odontoglossum Thompsonianum, GARNIER in *Journal des Orchidées*, IV, p. 108.

The superb form which we now figure flowered at the end of May in the houses of the HORTICULTURE INTERNATIONALE, Brussels. Immediately afterwards it passed into the collection of W. THOMPSON, Esq., Walton, Stone, Staffordshire. It is well known that Mr THOMPSON is a special lover of Odontoglossums, and that the collection of plants of this genus which he exhibited at the recent grand show at Manchester in June last obtained the first prize, namely a Silver Cup.

As M. MAX GARNIER pointed out when recently describing the plant in the *Journal des Orchidées*, it belongs to the hystrix group. What we generally call *Odontoglossum hystrix* (BATEMAN) in cultivation, however, is only a form of *O. luteo-purpureum*. But this species is one of the most variable in the entire genus, and one of the most polymorphous among Orchids. In order to be convinced of this it is only necessary to pass in review the numerous synonyms or innumerable varieties named in gardens or figured in the different journals which are devoted to Orchids. The form and colour of the segments varies infinitely, and for those cultivated in gardens it is necessary to adopt different names to represent the principal types, and under the name hystrix (which signifies a porcupine, and is given in allusion to the spiny crest) those forms of *O. luteo-purpureum* which have the segments, and especially the petals toothed and fimbriate along the margins.

Odontoglossum Thompsonianum has decidedly this character, and is of very graceful appearance, besides which the segments are broad and spreading, and altogether we may consider it as one of the most beautiful forms of this group. The sepals are bright brown with a light yellow border at the base and summit. The petals, which are very broad in the middle and almost of rhomboid shape, are of a light yellow ground colour, with three or four brown blotches in their lower half, across the base, and a much larger blotch near the summit. The clear yellow lip bears a large brown blotch at the centre, and near the basal margin some much smaller spots of the same tint.

In presence of such varied forms, which group themselves round *O. luteo-*

purpureum, as round *O. crispum* and some others, the question always remains whether these forms should be considered as representing varieties or natural hybrids between the typical species and some allied one. *O. Thompsonianum* appears to be the result of a cross between *O. luteo-purpureum* and *O. Coradinei* or some allied form. We do not attempt the task of deciding a question of this kind, and we think the better plan, is to give to this unique plant a special name, without calling it either a hybrid or a variety.

Odontoglossum luteo-purpureum, to which it is most allied was, as is well-known, discovered by M. LINDEN, in 1842, in the forests of Quindiu, on the central Cordillera of New Granada, and was described by LINDLEY in the *Orchidaceae Lindenianae* from dried specimens collected by the former. Afterwards it was also discovered by Weir in the *Odontoglossum crispum* district. It is therefore evident that it may have produced numerous intermediate forms by crossing with this species, also with *O. Lindleyanum*, *O. odoratum* and *O. Coradinei*.

L. L.

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PART XXXII. SEPTEMBER 1893.

LINDENIA

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CONTENTS :

	Pages
Cymbidium grandiflorum Griff. var. punctatum Cogn.	13
Odontoglossum Triomphe de Rambouillet Hort.	15
Galeandra Claesii Cogn.	17
Cymbidium Lowianum Rchb. f. var. superbissimum Lind.	19

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CYMBIDIUM GRANDIFLORUM GRIFF. var. PUNCTATUM COGN.

L. Chantrens pinx. P. De Pannemaeker chromo

PL. CCCLXXXIX.

CYMBIDIUM GRANDIFLORUM GRIFF. var. PUNCTATUM COGN.

THE LARGE-FLOWERED CYMBIDIUM, DOTTED VARIETY.

Cymbidium SWARTZ. Sepala subaequalia, libera, patentia, lateralia interdum basi sub labello brevissime connata. Petala sepalis similia vel paullo minora. Labellum ad basin columnae sessile, erectum, basi concavum, trilobum; lobi laterales latiusculi, erecti, columnam laxe amplectentes, medius patens vel recurvus, indivisus, disco varie bilamellato. Columna longiuscula, semiteres, curvula, exalata vel anguste bialata, apoda; clinandrium parum prominulum, truncatum vel obliquum. Anthera terminalis, opercularis, incumbens, valde convexa vel late semiglobosa, unilocularis vel imperfecte bilocularis; pollinia 2, late subglobosa, cerea, profunde sulcata vel e duobus sibimet arcte applicatis uno minore conflata, in anthera collateraliter contigua, appendicula parva transversa vel divaricato-bilamellata connexa, anthera dehiscente mediante appendicula glandulae squamiformi transversae affixa. Capsula oblonga, saepe majuscula, interdum breviter rostrata.

Herbae epiphyticae, caulibus foliatis abbreviatis cum foliorum basibus plus minusve in pseudobulbum incrassatis. Folia saepe longissima, coriacea, venis elevatis percursa, vel breviora magis carnosa laevioraque; vaginae basi dilatatae in caule imbricatae, vetustiores saepe ad fibras diu persistentes reductae. Pedunculi vel scapi inter folia vel ad basin caulis oriundi, longi, simplices vel rarissime ramosi, basi vaginis laxis interdum fere in folia brevia productis stipati. Flores majusculi, laxe racemosi, breviter pedicellati, racemis haud raro elongatis pendulisque. Bracteae breves.

Cymbidium SWARTZ *Nov. Act. Soc. Sc. Upsal.*, VI, p. 70 (1799) et in *K. Vetenst. Acad. Nya. Handl. Stockh.*, XXI, p. 236 (1800), pro parte. — LINDL. *Gen. and Spec. Orch.*, 161 (part.). — RCHB. F. in WALP. *Ann. Bot.*, VI, 622. — BENTH. et HOOK. *Gen. Plant.*, III, p. 536. — HOOK. F. *Fl. Brit. Ind.*, VI, p. 8. — VEITCH, *Man. Orch. Pl.*, part. IX, p. 10.

Iridorchis BLUME *Orchid. Arch. Ind.*, 90 (1858).

Cymbidium grandiflorum. Foliis elongatis, lineari-lanceolatis, acutis, vaginis valde striatis; pedunculo robustissimo, decurvo, racemoso, 7-12-floro; bracteis minutis; floribus amplis; sepalis petalisque stellato-patulis, oblongo-lanceolatis, acutis, viridibus, petalis paullo angustioribus; labello flavescente intus purpureo-maculato, utrinque velutino, margine breviter ciliato, lobis lateralibus basi subsemicordatis seu aequalibus antice angulatis, lobo antico late ovato subcordato margine crispo sublobulato, disco a basi usque paullo ultra medium lamellis geminis velutinis instructo.

Cymbidium grandiflorum GRIFF. *Notul.* III, p. 342 (1851) et *Ic. Plant. Asiat.*, t. 321. — HOOK. F. *Fl. Brit. Ind.*, VI, p. 12. — *Gard. Chron.*, ser. 3, XI (1892), p. 267. — VEITCH *Man. Orchid. Pl.*, part. IX, p. 18. — *Journ. of Hortic.*, 1893, p. 153, fig. 27.

C. Hookerianum RCHB. F. in *Gard. Chron.*, 1866, p. 7. — BATEM. in *Bot. Mag.*, t. 3574 et *Sec. Century Orch. Pl.*, t. 187. — DU BUYSS. *L'Orchidoph.*, p. 267. — WILLIAMS *Orch. Grow. Man.*, edit. 6, p. 233. — WATSON, *Orchids*, p. 149.

C. giganteum (part.) LINDL. in *Journ. Lin. Soc.*, III, p. 29 (non WALLICH).

C. giganteum var. Hookerianum BOIS. *Orchid.* p. 119 (1893).

Cymbidium spec. GRIFF. *Itin. Not.*, p. 145, nº 698.

Crescit in Himalaya orientali ad Nepalia, Sikkim et Bhotan, altit. 1700-2500 m.

Var. punctatum. Sepala petalaque flavo-viridia, intus inferne purpureo-punctata. Labellum flavo-aurantiacum, punctis purpureis numerosis notatum.

Var. punctatum COGN. in *Journ. des Orchid.*, 4me année, p. 76 (1893). — *The Orchid Review*, I, p. 200.

The genus Cymbidium, as it was founded by SWARTZ, and admitted by WILLDENOW, and more recently by LINDLEY, included a mixture of somewhat heterogeneous species, of which the greater part have since been transferred to other genera. The generic description given in the second

volume of this work, pl. 222, refers to that loosely defined genus of the old authors, and therefore we think it well now to supply in its place the description given by Bentham, which is far more accurate. Moreover, we must take the species figured under pl. 222 out of the Cymbidiums, and rank it in the allied genus Cyperorchis, which is distinguished by the far more dense scapes, by the segments of the perianth being considerably narrower, erect and converging together at least to the middle; by the lip being nearly right, erect with a much smaller terminal lobe; by the rostellum being far more prominent and beak-shaped; and by the pollinia being narrower, pyriform, with a nearly quadrangular gland.

As restricted by the more recent botanists, the genus includes still at least thirty species, the majority growing on the hilly parts of south-eastern Asia; a few species are disseminated in Australia, tropical Africa; in some isles of the Pacific Ocean, and one species is found in Japan.

The native country of *Cymbidium grandiflorum* is the eastern Himalaya, where it is found between 5000 and 7500 feet elevation.

It is characterized by its long acute leaves, reaching to a length of 24 inches, and 1 to 1 1/2 broad, strongly striped with alternately pale and bright green lines along their sheathing base. The stout, more or less drooping scape, terminates in a raceme of 7 to 12 very large flowers, measuring no less than 5 and even sometimes 6 inches across in some forms. The spreading lanceolate oblong and acute petals and sepals, are uniformly pale green in the type, while in the variety *punctatum* they bear at their base a number of dark purple spots. The lip, somewhat villose on both sides, is tinged with very pale yellow in the species, and bears some purple blotches, rather large at the apex, smaller and more numerous towards the base; while in the variety its colour is a somewhat brighter yellow, spotted with purple dots in a nearly regular way; it is somewhat contracted at its base, forming a claw with the edges connate to the column up to 2 3/4 to 3 1/4 inches; the front lobe is nearly rounded, wavy and nearly lobulate at the margin; the disc bears two longitudinal very hairy plates, extending from the base nearly to the base of the front lobe.

The species flowered for the first time in English gardens at the beginning of 1866, and was immediately described by Reichenbach as a new species under the name of *C. Hookerianum;* but Sir Joseph Hooker, to whom the species was dedicated, observed himself, in his *Flora of British India* (1890), that it is identical with *C. grandiflorum*, described and figured by Griffith fifteen years before. We must therefore keep the latter name.

The variety which we now figure appeared this year in the houses of L'Horticulture Internationale, of Brussels.

A. Cogniaux.

ODONTOGLOSSUM TRIOMPHE DE RAMBOUILLET HORT.

A. Goossens pinx. P. De Pannemaeker chrom.

PL. CCCXC.

ODONTOGLOSSUM TRIOMPHE DE RAMBOUILLET HORT.

ODONTOGLOSSUM. Vide *Lindenia*, Engl. ed., vol. I, p. 19.

Odontoglossum Triomphe de Rambouillet. An hybridum naturale inter *O. crispum* et speciem aliquam ejusdem loci incolam? Floribus equidem speciosissimis, sepalis petalisque roseis carmineo purpureo maculatis, basi et apice candidulis, labello candido praeter discum aureum.

The superb form which we figure here must be considered as one of the gems of the group of natural hybrids allied to *Odontoglossum crispum*. By its segments it somewhat resembles *O.* × *Ruckerianum*, and it has also a similar rosy colour, which is particularly bright on the borders of the petals and sepals, though the colour is more pronounced than usual in that form. On the other hand the large purple blotches which stand out from the ground colour give it a distinct aspect.

It is a form of the first rank, and we are pleased to state that it is not the first success of the distinguished amateur with whom it has appeared; M. DALLEMAGNE, Civil Engineer, of Rambouillet, France. Many beautiful Orchids, of which one particularly has been recently figured in this work, under the name of *Miltonia vexillaria var. virginalis*, are already known in the world of Orchidophilists from his beautiful and rich collection, which promises very soon to be one of the most remarkable on the continent.

L. L.

CULTURE OF CYMBIDIUM.

Cymbidiums are among the Orchids which are called epiphytes, though in their mode of growth they are certainly more nearly allied to the terrestrial genera. There occur certainly, as explorers of the Himalayan jungles have discovered, among the branches of dead trees, or in the gaping cavities of old trunks, some species of Cymbidium having their leaves thick and hard, like leather. *C. aloifolium*, *C. pendulum*, and even *C. sinense*, which thrive well under these conditions. *C. eburneum*, also, is occasionally found growing as an epiphyte on the branches of large trees. But the species never offer under these conditions the vigorous aspect and prosperity which they present in places where their roots can procure a more abundant and more substantial nourishment.

C. grandiflorum, *longifolium*, *giganteum* and *Devonianum* appear on the mountain sides at about 6,000 feet elevation, in situations analagous with the preceding, and on more than one occasion collectors have gathered them in the cavities of the trees, as in these kinds of pouches the seeds rest and germinate easily when thus sheltered from gusts of wind. But these trees, bathed with humidity, are usually covered with a thick coat of moss, which generally hides a depth of debris from dead leaves and decaying mosses. It is in this favourable compost that the roots of Cymbidium seek their nutriment, and very rarely are they found attached to the flanks of the trees.

We conceive that differences in the habitat lead to considerable differences in the mode of vegetation of the plants. The species which grow near the ground are subjected to a temperature truly tropical, abundantly exposed to the rays of the sun, and living nearly always in a very dry atmosphere; the rains being feeble and not frequent.

In the upper regions, on the contrary, the forests are much thicker, and the Cymbidiums much more in the shade. At the same time the evaporation of water is less rapid. The rainy season continues almost uninterruptedly from June to October, and this season over the mountains are nearly always enveloped in thick mist, which maintains around the plants an atmosphere saturated with humidity.

The culture of Cymbidiums is not particularly difficult. Most of the failures experienced by certain amateurs arises from keeping them in too high a temperature. They should be potted in a compost, composed of substantial materials.

Most Cymbidiums succeed perfectly in the Cattleya house, or in a well-ventilated warm house. They rapidly make strong specimens, which have a very decorative appearance, especially when the flower stems appear, and bend gracefully inflected above the leaves. These beautiful plants should be repotted, according to the rapidity of their growth, about every other year.

GALEANDRA CLAESII COGN.

PL. CCCXCI.

GALEANDRA CLAESII COGN.

M. F. CLAES'S GALEANDRA.

Galeandra LINDL. Sepala aequalia, libera, patentia. Petala sepalis similia vel paullo latiora. Labellum basi columnae affixum, in calcar amplum subinfundibuliforme descendens productum; lobi laterales lati, erecti, columnam laxe amplectentes vel involventes; medius patens, rotundatus vel bilobus; discus medio varie cristatus vel lamellatus. Columna brevis vel parum elongata, apoda, apice breviter bialata; clinandrium valde obliquum, postice acuminatum. Anthera terminalis, opercularis, incumbens, obtuse et interdum longiuscule acuminata, imperfecte bilocularis; pollinia 4, cerea, ovoidea, per paria saepius connexa, inappendiculata, anthera dehiscente glandulae rostelli membraniformi vel disciformi vix in stipitem brevissimum productae affixa. Capsula erostris.

Herbae terrestres vel epiphytae, caulibus foliatis basi in pseudobulbum tuberiformem vel elongatam incrassatis. Folia disticha, basi vaginantia, angusta, plicato-venosa. Racemi terminales, pedunculati, simplices. Flores speciosi vel mediocres, breviter pedicellati. Bracteae parvae vel angustae.

Galeandra LINDL. in BAUER *Ill. Orchid. Pl. Gen.*, tab. 8 (1830) et *Gen. and Sp. Orchid.*, p. 186 (1832), part. — ENDLICH *Gen.*, p. 201. — RCHB. F. in WALP. *Ann. Bot.*, VI, p. 648. — BENTH. et HOOK. *Gen. Plant.*, III, p. 536. — VEITCH *Man. Orch. Pl.*, part. IX, p. 5.

Corydandra RCHB. *Nomencl.*, p. 53 (1841).

Galeandra Claesii. Pseudobulbis gracilibus, elongato-cylindraceis subfusiformibus, leviter sulcatis, anthesi 5-7 foliatis; foliis parvis, erecto-patulis, oblongo-lanceolatis, acutis, uninerviis, basi longiuscule vaginantibus; racemo longiusculo, nutante, superne laxe 6-floro; pedunculo inferne longiuscule plurivaginato; bracteis ovato-lanceolatis, acutis, ovario multo brevioribus; floribus mediocribus, patulis; sepalis lanceolatis, breviter acuminatis; petalis paullo latioribus, acutis; labello subtrapeziformi, margine leviter undulato, lobis late triangularibus, lateralibus obtusis, intermedio subretuso et minute apiculato, disco a basi ad medium tricristato, cristis lateralibus glabris, intermedia longiore superne longe villosa; calcari lineari-conico, leviter sigmoideo-flexuoso, apice acutiusculo, ovario sublongiore; columna antice densiuscule longeque villosa; anthera glabra, in cristam transversam obtusam subtruncatam longe producta.

Galeandra Claesii COGN. *supra*.

Crescit in Brasilia.

LINDLEY, in his *Genera and Species* (1832), enumerated but three species of Galeandra, and yet two of the three belonged really to the genus Eulophia. In fact the two genera are closely allied, and many species included in the former must be placed in the latter, amongst which all the African species that have been described as Galeandras.

The following are the chief differences between the two genera. In the Galeandras the scape terminating the stem is always foliate, the lip is produced in a large and infundibuliform spur, the anther is provided above with a broad transverse crest, and the pollinia are nearly destitute of pedicel; while in the Eulophias the flowers are usually produced on a leafless scape, the lip bears only at its base a prominence or a small spur included between the lateral sepals, the anther is semi-globular, and the pollinia are fastened to a more or less elongated pedicel.

Twenty species of Galeandra at least are known at present, all natives of tropical America, and extending from Brazil to Mexico.

Galeandra Claesii has very slender pseudobulbs, scarcely exceeding the size of a penholder, 10-18 inches long, cylindrical, hardly fusiform, slightly furrowed, with little distant, not inflated knots, pale bluish-green at first, then deep green, clothed with the grey remains of the dried old leaves. The leaves, 5-7 in number, are rather spreading, one-nerved, of a somewhat glaucous bluish-green, 2 1/2 to 3 inches long, and 1/3 inch broad, the upper ones decreasing suddenly in sheaths clothing the inferior part of the peduncle; they extend at their base in greyish membranous sheaths, rather densely dotted with purple, with a stout, blackish-purple longitudinal line on either side. Inflorescence 9 inches long, decidedly bent down, the upper part drooping, bearing towards it apex six flowers horizontally spreading, each of them provided with a bract 1 3/4 to 2 1/2 inches long. The sepals and petals are minutely 5-nerved, green strongly washed with vinous purple; the sepals are about 1 1/6 inches, and the petals 1 inch long. The lip is obtuse, scarcely retuse at the apex, vinous purple towards its extremity, then paler, passing to yellowish green at the spur, with bands washed with somewhat vinous purple; the basal part of the disc bears three parallel crests, the middle one, hairy above, entends in a line of long whitish hairs; the spur is slender, acute and somewhat flexuous, 1 inch long. The column is about 1/3 inch long, very pale yellow, with some short purple streaks on the front side, which is covered with long whitish flexuose hairs, rather loose at the middle, more dense under the stigma, and chiefly at the base. Anther yellowish-orange, paler above, dark purple at the apex.

This new species bears, in many of its characteristics, a considerable resemblance to *G. villosa* Barb. Rodr. (*Gen. et Sp. Orchid. nov.*, I, p. 85-1877), a native of Rio Negro, in the province of Amazonas. In this latter species, the pseudobulbs are of the same colouring, but considerably more swollen at their middle, and therefore more fusiform; the leaves are less numerous, more erect, and several times longer; the inflorescence is less drooping, the flowers larger and of a rather different colour; the lip more distinctly emarginate at the apex, with a thick tuft of hairs, instead of a single hairy line at the middle of the disc; the anther retuse at and the apex, instead of hardly truncate.

G. Claesii was sent from Brazil to L'Horticulture Internationale, of Brussels, by their skilful collector M. Fl. Claes, to whom it is properly dedicated. This charming novelty flowered in the houses of the same establishment at the beginning of July last.

A. Cogniaux.

CYMBIDIUM LOWIANUM RCHB. F.

PL. CCCXCII.

CYMBIDIUM LOWIANUM RCHB. F. var. SUPERBISSIMUM LIND.

Mr. LOW'S CYMBIDIUM, VERY SPLENDID VARIETY.

CYMBIDIUM. Vide supra, p. 13.

Cymbidium Lowianum. Racemo *C. gigantei*, labello tamen trifido, laciniis lateralibus angulatis, lacinia antica cordato-triangula expansa, non undulata; callis in ipso disco ante basin laciniae anticae crassis triangulatis; caudiculae cruribus divaricatis aristaeformibus. Flores viriduli brunneo striati. Labellum albido flavidulum, disco laciniae anticae purpureo, margine angustissime flavidulum. Calli antice purpureo lavati. Maculae quaedam purpureae in labelli basi. Columna ima basi purpureo maculata.

Var. superbissimum. Floribus magnis, labelli lobo anteriore splendide purpureo-aurantiaco maculato.

Cymbidium Lowianum RCHB. F. in *Gard. Chron.*, 1879, i, p. 332. — *Floral Mag.*, n. s., t. 353.

Cymbidium giganteum var. Lowianum RCHB. F. in *Gard. Chron.*, 1877, i, p. 685.

Cymbidium Lowianum was introduced in 1877, by Messrs Low & C°, of Clapton, and described by REICHENBACH the same year, from rather incomplete dried materials, under the name of *Cymbidium giganteum var. Lowianum*. It flowered for the first time in 1879, when the celebrated Orchidographer gave to it its proper specific name. He then described it in the following terms : —

" This is a beautiful novelty, according to my taste. It ranks near *Cymbidium giganteum* WALL., and *C. longifolium* DON, the two short abrupt calli in the disc of the lip, the cordate not wavy anterior lacinia of the lip, and the straight short divaricate tails of the caudicula, give it the strongest claim to be considered an excellent, well-marked species.

.....There are no ciliae of the lip, no hairy running lines from the disc to the anterior part, no wavy middle lacinia. The large flowers have sepals and petals green, with a few faint sepia-brown lines over the strongest nerves. These organs get more pallid by and bye, changing to a yellowish green. The lip is whitish yellow, disc of anterior lacinia in the beginning purple, later maroon brownish purple, with a very narrow pallid border, and there are some purple spots at the base of the lip. Calli washed on their anterior parts with purple. The anterior part of the base of the column has a few spots.... I am informed it takes a very long time to expand its flowers : this is also the case in *C. Hookerianum*, as is well known. "

The plant was exhibited on the 11th March, at a meeting of the Royal Horticultural Society of London, and obtained a First-class Certificate. Since then it has been distributed in large numbers, and is now the most popular species in the genus. It is a plant of vigorous growth, and forms strong spec

imens, which have a great decorative value, by reason of their long and graceful leaves, and especially by their free-flowering qualities. Each raceme bears from sixteen to twenty-two or twenty-four flowers.

The variety which we figure to-day is distinguished by the colour of the front lobe of the lip, which is much brighter than usual. It is of a superb coppery purple red, very dark on the margins, and forms a very elegant contrast with the colour of the other segments.

This variety made its appearance this year in the houses and among the importations of L'Horticulture Internationale, of Brussels.

C. Lowianum, as well as the present variety, is a native of Burma. It flowers in spring, from March to June, and the flowers remain in perfection for a long time, as is usually the case with those whose flowers develop very slowly.

The culture of *C. Lowianum* is easy. The failures which some cultivators occasionally experience usually arises from keeping the plants constantly in too high a temperature, an error which is easily explained by the habitat of the species. But although *Cymbidium Lowianum* comes from a part of tropical Asia, it requires only a moderate temperature, that is, about midway between the temperate and warm houses, and especially in a light and well ventilated compartment.

The compost should be substantial, and occasional waterings with weak liquid manure should be given. In fact Cymbidiums, though spoken of as epiphytal, are analogous with terrestrial Orchids in their vegetation, and are generally found in the cavities of old trees or in crevices of rocks filled with moss and vegetable matter.

Cymbidium Lowianum requires abundance of water during its growing season. As it grows so rapidly, it is advisable to repot the plants every second year. This species is easily multiplied by division.

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PART XXXIII. OCTOBER 1893.

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CONTENTS :

	Pages		Pages
Zygopetalum grandiflorum Hemsl. . . .	21	Cattleya velutina Rchb. f.	25
Lycaste cinnabarina Rolfe	23	Vanda tricolor Lindl. var. Hoveae L. Lind.	27

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ZYGOPETALUM GRANDIFLORUM HEMSL.

PL. CCCXCIII.

ZYGOPETALUM GRANDIFLORUM HEMSL.

THE LARGE FLOWERED ZYGOPETALUM.

ZYGOPETALUM. Vide *Lindenia,* Engl. ed., I, p. 27.

Zygopetalum grandiflorum. Pseudobulbi ovati, lucidi, diphylli. Folia valde coriacea, lanceolata, acutissima. Scapi basilares, breves, 2-5-flori. Bracteae ovato-lanceolatae, acutae. Sepala lanceolata, acuminata, patentia, subaequalia. Petala sepalis similia. Labellum brevissime unguiculatum, articulatum, trilobum, lobo intermedio late orbiculari-ovato denticulato apice acuminato recurvo, lateralibus erectis semiovato-oblongis denticulatis, crista carnosa transversa spinoso-denticulata. Columna arcuata, alis rotundato-oblongis truncatis denticulatis.

Zygopetalum grandiflorum HEMSL. *Biol. Centr. Amer.*, III, p. 251. — VEITCH *Man. Orch.*, IX, p. 52.

Galeottia grandiflora RICH. et GAL. in *Ann. Sc. Nat.*, sér. 3, III, p. 25.

Batemania grandiflora RCHB. F. in *Bonplandia,* IV (1856), p. 323. — ID. in WALP. *Ann.*, VI, p. 555. — *Bot. Mag.*, t. 5567.

This is a very remarkable species, and very seldom met with in cultivation. It was originally described by RICHARD and GALEOTTI, under the name of *Galeottia grandiflora*, from dried specimens collected by the latter in Mexico.

It appears to have next been met with in New Granada, by the collectors of M. J. LINDEN, who sent living plants to Europe. One of the earliest cultivators of the plant was the late M. SIGISMUND RUCKER, of West Hill, Wandsworth, in whose collection it flowered in 1865 (probably not for the first time, however), when it was figured in the *Botanical Magazine*.

It was also met with in British Honduras, in April, 1887, by M. BLANCANEAUX, who sent dried specimens to Messrs JAMES VEITCH & Sons, of Chelsea. M. BLANCANEAUX states that he found the plant in full bloom at 3,600 feet elevation, in a temperature ranging from 50 to 85 degrees. It was growing on a tree overhanging a mountain stream in an entirely shady place, a species of Stanhopea also growing profusely in the same locality, which it somewhat resembled in habit. This note is interesting, as affording an indication of the treatment necessary for the successful cultivation of the plant.

The species appears to be very widely diffused, for a recent importation is said to have been made from northern Peru, where it was met with by Mr. BUNGEROTH, in the province of Truxillo.

It is a somewhat anomalous species, referred to the section *Huntleya*, with the other species of *Batemania* described by REICHENBACH, though it differs from its allies in having pseudobulbs, and a two- to five-flowered inflorescence. The scapes are very short, and the flowers three inches in diameter. The sepals and

petals are light green with five to seven longitudinal red-brown lines. The lip is sharply denticulate at the margin, white with red-purple raised lines, which are also denticulate. The crest is semicircular, orange-yellow, with numerous red brown radiating ridges, each of which terminates in a spine-like tooth in front.

As regards its cultivation very little is known, except that it grows wild in company with Stanhopea, and we therefore recommend that it should be grown under identical conditions.

R. A. Rolfe.

EULOPHIELLA ELISABETHAE.

" *The Standard* " of October 23 last has published the following letter, from the well-known explorer, the Rev. R. Baron : —

" To the Editor of " *The Standard* "

Sir. — In *The Standard* of July 25 there is a translation of a letter adressed to Messrs. Sander, of St. Albans, the well-known Orchid-growers, from M. Hamelin, the discoverer (?) of the new Orchid from Madagascar, the *Eulophiella Elisabethae*. As I have been a resident in Madagascar for more than twenty years, and have probably travelled more in the island than any other European, and have gathered many thousands of plants in the north, south, east and west, I have felt constrained to write to you on the subject.

Whether to secure a high price for the Orchid, I cannot say, but certain it is that many-nay, most of the statements made by this gentleman are somewhat imaginary.

The procuring of the Orchid has been surrounded by an air of mystery and danger which makes the story utterly incredible to anyone acquainted with Madagascar. The narrative is larded throughout with such phrases as the following : — " *Eulophiella Elisabethae hardly exists now. The plant grows in a country inaccessible to Europeans. I had a special privilege accorded me to penetrate those regions* " etc. " *This plant only grows in a very limited region* „ (*I believe he somewhere states a " swamp* ")..... " *on the tops of the tallest trees.* " " *Under the special care of my brother in blood..... to prevent the total extinction of the species.* " " *Amateurs may trust that no plant of this species can or will be imported.* " " *Enormous difficulties and manifold dangers have to be surmounted before even the country where they grow can be reached.* " " *I had numerous obstacles to overcome, and was obliged to make enormous sacrifices, and to incur fearful expenses,* " etc. " *An amateur paying one hundred shillings for a plant would not cover the cost. Not counting the constant exposure of my life, and the lives of those accompanying me — not only was our party exposed to the risk of being strangled by ferocious and hostile tribesmen, a fate that befell many a poor fellow belonging to our expedition, but we had to struggle almost night and day against the wild animals haunting these primeval forests. The most terrible of all is the* Protocrypta ferox Madagascariensis (sic), *against which we had constantly to be on guard. During the daytime it is extremely dangerous, for it crouches in the forks of trees,.... and watches for its prey.* " *Big fires had to be constantly kept up,* " etc. *The favorite haunt of the* Protocrypta ferox *seemed to be amongst the masses of foliage where the Eulophiella grew. Here they were numerous.* " " *Appalling danger.* " " *There are also some gigantic hippopotamus and rhinoceros fossils in Madagascar, which I found in certain parts, and which, according to their bones, must be nearly six times as large as our elephants.* "

Now the truth is that no rhinoceros bones have ever been discovered in Madagascar, and the bones of the extinct hippopotamus indicate an animal " of rather small dimensions. " It is simply in

(*To be continued on p.* 24.)

LYCASTE CINNABARINA ROLFE

PL. CCCXCIV.

LYCASTE CINNABARINA ROLFE.

THE CINNABAR LYCASTE.

LYCASTE. Vide *Lindenia,* Engl. ed., III, p. 11.

Lycaste cinnabarina. Pseudobulbi ovoideo-oblongi 8,5 cm. longi. Folia lanceolato-v. elliptico-oblonga, subacuta, basi attenuata, 70 cm. longa, 13 cm. lata. Scapi circa 15 cm. alti, vaginae 3-4 cm. longae. Sepalum posticum lanceolato-oblongum, subobtusum, 6-8 cm. longum, 2 cm. latum; lateralia falcata, caeteris similia; mentum obtusum, 1 cm. longum. Petala elliptico-oblonga, subobtusa, basi attenuata, 6 cm. longa, 2 cm. lata. Labellum elliptico-oblongum, obscure trilobum, basi attenuatum, 4 cm. longum, lobis lateralibus parvis rotundatis obtusis, intermedio orbiculari-oblongo, obtuso v. emarginato undulato denticulato, callo magno carnoso truncato. Columna clavata.

Lycaste cinnabarina ROLFE in *Orchid Review,* I, p. 303.

This handsome Lycaste was discovered by WARSCEWICZ, at the sources of the Marañon River, Peru, as long ago as 1853. It was included in the Catalogue of WARSCEWICZ's sale, under the name of *Maxillaria cinnabarina* LINDL., as " a new species, with pale yellowish green flowers and a rich apricot-coloured lip. " This however appears to refer to dried specimens, not to living plants. It is interesting to record that the species has now appeared in cultivation, having been introduced from Peru by Messrs LINDEN, L'HORTICULTURE INTERNATIONALE, Brussels, in whose establishment it has recently flowered. The species is allied to *L. mesochlaena* RCHB. F. and *L. gigantea* LINDL. In the shape of the sepals and petals it much resembles the former, also in its light yellowish green colour; but the lip is totally different in both respects. The side lobes are small and rounded, in fact nearly obsolete instead of being oblong and well developed, while the colour, instead of being similar to that of the sepals and petals, is of a deep apricot or light orange-brown, which forms an elegant contrast with the sepals and petals. The front lobe is undulate and slightly denticulate, especially on the sides. *L. gigantea* has long scapes and longer more acute sepals and petals, besides which, in this species, the bract is three times as long as the ovary.

Several of WARSCEWICZ's Peruvian species have remained almost unknown for long periods after their original discovery, and their re-appearance is certainly very interesting. *Odontoglossum praestans*, figured some time ago in this work, is another of these Warscewiczian plants, of which prior to its rediscovery very little was known.

Lycaste cinnabarina will doubtless succeed well under the same treatment as its allies, and from its distinctly contrasted colours will probably form a welcome addition to the group with ciliated lips, which includes *L. costata* LINDL.,

L. mesochlaena RCHB. F. (often cultivated under the preceding name), *L. fulvescens* HOOK., *L. gigantea* LINDL., *L. lanipes* LINDL., *L. linguella* RCHB. F., and two or three other species more rarely met with in gardens.

R. A. ROLFE.

(*Concluded from p.* 22.)

the interest of truth, and because these adventures have been given such prominence in so many English papers, that I write you these lines. To me the only valuable fact connected with this story is that M. HAMELIN has discovered a new and interesting Orchid somewhere in Madagascar, probably in the south or south-west, where travelling is somewhat dangerous.

I am, Sir, etc.

R. BARON.

Antananarivo, Madagascar, September 12.

To the above letter, we hardy need to add further comment.

ORCHID CULTURE IN BELGIUM AND IN ENGLAND.

The *Journal des Orchidées* for October 15 contains an article by M. LUCIEN LINDEN, in which he compares the English and Belgian methods of growing Orchids. He says of us, that " Our neighbours are, as is well known, excellent growers of Orchids. The splendid specimens and the admirable show of bloom in the collections of the principal English amateurs afford sufficient proof of this. At the same time, I have been struck with certain differences from our methods of treatment, which I consider show the superiority of the Belgian method of cultivating Orchids. The chief difference seems to me to consist in the deficient supply of air and light, and to my mind this is of great importance. In the second place, the plants are usually too dry. Many Orchidhouses in England are half-span, consequently badly lighted and insufficiently ventilated, even those where Odontoglossums from the Cordilleras are grown, though these especially require free circulation of the air. The ventilators are too few, too small, and evidently are hardly ever opened. I have sometimes seen them formed of perforated zinc, through which hardly any air passes, and sometimes too little top air is afforded. Almost everywhere I noticed a most objectionable custom, that of covering the stages with a thick layer of coke of charcoal, instead of using open-work stages, which allow the air to circulate between the pots. I also observed an excessive temperature in many houses, especially in those devoted to Odontoglossums and Masdevallias. Many growers pay too little attention to the supply of light; their houses are darkened, frequently with a rather thick blind. Our lattice-work screens temper the light, and are much to be commended. English growers trust entirely to the resting-season to ripen their plants, and they attach so much importance tho this period, that they keep their Orchids extremely dry even during their growth. In England there is not seen that vigorous growth which is shown in plants grown according to the Belgian methods.

(*To be continued on p.* 28.)

CATTLEYA VELUTINA RCHB. F.

PL. CCCXCV.

CATTLEYA VELUTINA RCHB. F.

THE VELVETY CATTLEYA.

CATTLEYA. Vide *Lindenia,* Engl. ed., I, p. 7.

Cattleya velutina. Pseudobulbi elongati, teretes, graciles, diphylli, 30-46 cm. longi. Folia oblonga v. lanceolato-oblonga, obtusa, 10-12 poll. longa. Spatha lineari-oblonga, subacuta, 2 1/2-3 poll. longa. Racemus 2-4 florus. Sepala lanceolato-oblonga, acuta, apice recurva, posticum 6-7 cm. longum, lateralia falcata, 5 cm. longa. Petala falcata, elliptico-oblonga,obtusa, basi attenuata. Labellum panduratum 5 cm. longum, lobis lateralibus parvis semiorbicularibus, intermedio orbiculari v. reniformi-orbiculari obtuso v. emarginato undulato, disco omnino velutino. Columna arcuata, 2 cm. longa.

Cattleya velutina RCHB. F. in *Gard. Chron.*, 1870, p. 140 et p. 1373. — ID., 1872, p. 1259, fig. 288, 289. — WARN. & WILL. *Orchid Album,* I, t. 26. — VEITCH *Man. Orch.*, II, p. 87. — ROLFE in *Gard. Chron.*, 1889, i, p. 802 et ii, p. 401.

Var. Lietzei REGEL in *Gartenflora,* XXXVII, p. 49, t. 1265.

This handsome Cattleya was originally described in 1870, from a plant which flowered in the collection of JOSEPH BROOME, Esq., of Didsbury, near Manchester. It was said to have been received in a collection obtained through a collector whose head-quarters were at Rio. It was described as " a very interesting and intricate novelty. The pollen apparatus is quite genuine, as in all Epidendrums. Hence, if it is a mule, it is at least from genuine Cattleyoid parents. If we were entitled to offer some hypothesis, we might suggest that it may have descended from *Cattleya Walkeriana* GARDN. (*bulbosa* LINDL.) and from *C. Schilleriana* RCHB. F. " The flowers were also said to be so fragrant as to perfume the whole house in which they were grown. The sepals and petals were described as olive-green with some purplish spots in rows, and the lip yellow, rosy in front, with dark purplish veins, and wholly velvety.

Soon afterwards a much finer variety appeared, in the collection of Consul SCHILLER, at Hamburg, with the sepals and petals light orange, covered with many purplish spots and streaks. REICHENBACH then remarked that if the plant was a mule, *Cattleya bicolor* might be one of the parents. " We would advise all the possessors of *Cattleya bicolor*, " he added, " and especially of recently introduced plants, not to dispose of their specimens before they flower, since it would be very tantalising to ascertain at a later period that a plant supposed to be one of that old species had proved to belong to such a first rate beauty as the present. "

In 1873 another plant appeared, in the collection of E. G. WRIGLEY, Esq., of Broad Oaks, Bury, Lancashire, which REICHENBACH said was quite like the original form.

For many years it remained excessively rare, until further importations were received. In 1887, Messrs Veitch remarked of it : — " A supposed hybrid of whose origin various hypotheses have been advanced, but that which ascribes its parentage to *C. bicolor* and one of the *C. guttata* forms, with which it has been imported, appears to be supported by the best evidence.... Recent importations of this Cattleya from Brazil prove that it exists in numbers much less restricted than is usually the case with supposed hybrids; it may, therefore, hereafter receive specific rank. "

In 1889, for the first time, I had the opportunity of examining living flowers, and wrote — " I fail to find any trace of hybrid origin, and believe it to be a genuine and very distinct species, not approaching any other in the peculiar form of the lip. "

From these remarks it will be seen that for many years this beautiful Cattleya was regarded as a plant of very doubtful origin. How it ever came to be regarded as a natural hybrid I cannot conceive, for there is no combination of species which could possibly yield a lip like that of *C. velutina*, and the same remark also applies to the sepals and petals. The apparent rarity of the plant perhaps lent some support to the hypothesis, but rarity is of itself no test, otherwise the remarkable *Cattleya iricolor* Rchb. f. might be regarded as a natural hybrid, as for nearly twenty years it has only been known from one or two plants. But here again it may be observed that no possible combination would produce a hybrid similar in character. Like *C. velutina*, it is probably common enough in its unknown habitat, which sooner or later will probably be discovered, when the plant may become more common in cultivation. *Cattleya Dormaniana* Rchb. f. is another plant which for a long period was considered to be a natural hybrid, though for no better reason.

To return to *Cattleya velutina*, a glance at our illustration will give a better idea of its handsomely spotted sepals and petals and veined lip than the longest description. As to cultivation, it will succeed under the same treatment as is given to *C. bicolor*, *C. granulosa*, and other of the Brazilian Cattleyas.

R. A. Rolfe.

VANDA TRICOLOR LINDL. var. HOVEAE L. LIND.

PL. CCCXCVI.

VANDA TRICOLOR LINDL. var. HOVEAE L. LIND.

THE THREE-COLOURED VANDA, MADAME VAN DEN HOVE'S VARIETY.

VANDA. Vide *Lindenia,* Engl. ed., IV, p. 41.
Vanda tricolor. Vide *Lindenia,* Engl. ed., V, p. 21.
Var. Hoveae L. LIND., *supra.*

The *Lindenia* has already figured, in preceding volumes, the typical *Vanda tricolor* (t. 167), and more recently its remarkable variety *planilabris* (t. 369). The present variety admirably completes the series, which together show the marvellous range of colour which is met with in this beautiful species.

Vanda tricolor closely resembles *V. suavis* in its vegetative organs, and, like it, has numerous varieties, whose colours are so diverse that it is sometimes difficult without long experience to determine to which of the two certain forms belong.

There is, however, one difference wich may easily he determined, namely the disposition of the petals. These organs are reflexed in *Vanda suavis*, while they are spreading, like the sepals, in *V. tricolor*. This latter species therefore displays itself better and has more elegant flowers.

It would not be an easy task to enumerate all the named varieties of *V. tricolor*, although some amateurs possess very complete collections. When the plants are in flower they present a beautiful spectacle. In the front rank among amateurs of Vanda may be mentioned M. G. WAROCQUÉ, in Belgium, and, in France, M. A. DE LA DEVANSAYE, who sent to a meeting of the ORCHIDÉENNE during the present year a magnificent series of named forms.

The present variety is dedicated to the regretted Madame VAN DEN HOVE, mother of Madame LUCIEN LINDEN. This variety, which flowered about the middle of last year in the houses of the HORTICULTURE INTERNATIONALE, is remarkable for its very delicate colour, shaded in an exquisite manner, of which the annexed plate gives a very exact idea.

For the cultivation of Vandas plenty of humidity is required, and an equally pure atmosphere. During the period of active growth it is advisable to moisten the compost every day. The air should be seldom renewed, because the atmosphere of our climate is too dry for these beautiful Orchids. The rays of the sun should also not be allowed to reach the plants during the warmest days of summer.

The compost suitable for Vandas should be pure sphagnum. We generally cultivate them in baskets with plenty of drainage, consisting of broken glass and earthenware. When the roots have completely filled the baskets we cut the brass-wire which holds the bars together, and detach the lower ones, so that the basket is open at the bottom. We then remove the drainage, cut away all the dead parts of the roots and stem, replace with fresh sphagnum and drainage, and then refasten the bars.

When these Vandas lose their leaves, it is customary to hide the naked parts, which present an ungraceful appearance. We therefore proceed in something like the following manner. We detach the wire at the top, and add two or three fresh bars on either side, so as to increase the height, and then fill up this added portion with fresh sphagnum, which thus hides the naked part of the stem.

On the other hand, if we wish to avoid giving the baskets an increased height, we remove some of the bars at the base at the same time as others are added at the top.

The temperature suitable for Vandas during the winter ranges between 65° and 75° Fahr. *Vanda Amesiana*, *V. Kimballiana* and *V. coerulea*, however, succeed best under an appreciably lower temperature.

(*Continued from p.* 24.)

Orchids are less green, have fewer roots, and have much more slender floral stems. The Belgian cultivators water much more, and give a less long repose, but especially they give more air, and it is chiefly—as M. VAN IMSCHOOT remarked before me to an English gardener—air which ripens our plants. M. CAHUZAC has also recently drawn a comparison between the English and the Belgian gardener. The Belgian gardener is a more zealous worker, a most attentive observer of the thousand little matters of detail which the inexperienced would consider trifles, but which are really of great importance, he has more thought and interest, he varies his methods, has better taste, and he more readily adopts novelties, but he has not the patience, the trustworthiness (*solidité*), or the punctuality of the English gardener; the latter also knows the names of his plants better, has a better manner, is more particular in his dress and appearence; and is, in short, better educated. "

(*The Gardeners' Chronicle,* November 4, 1893.)

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PART XXXIV. NOVEMBER 1893.

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CONTENTS :

	Pages		Pages
Three Hybrid Cypripediums	29	Cattleya Aclandiae Lindl. var. salmonea Hort.	33
Maxillaria striata Rolfe	31	Aganisia lepida Lind. et Rchb. f. . . .	35

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THREE HYBRID CYPRIPEDIUMS.

1, CYPRIPEDIUM × CLAUDI L. LIND. — 2, CYPRIPEDINM × LATHAMIANUM RCHB. F.
3, CYPRIPEDIUM × WEATHERSIANUM L. LIND.

PL. CCCXCVII.

THREE HYBRID CYPRIPEDIUMS.

1, CYPRIPEDIUM × CLAUDII L. LIND.
2, CYPRIPEDIUM × LATHAMIANUM RCHB. F.
3, CYPRIPEDIUM × WEATHERSIANUM L. LIND.

CYPRIPEDIUM. Vide *Lindenia*, Engl. ed., vol. I, p. 31.

The genus Cypripedium is the one in which the ingenuity of the hybridists has been most put into practice, and the list of hybrids artificially produced is now very considerable. This same abundance allows us to exercise a rigorous selection, and to reject all the more ordinary forms, for, limiting ourselves strictly to the more beautiful forms, the genus has been definitely enriched by a large number of new hybrids which will remain, and gradually form a magnificent series of extraordinary diversity.

The three hybrids which we now figure on one and the same plate are all likely to become popular. Two of them were raised in Belgium, the third originated in England.

Cypripedium × *Claudii* made its appearance in the month of February last, at the monthly meeting of the ORCHIDÉENNE, of Brussels, being exhibited by M. Moens, of Lede, and it is dedicated to this amateur, whose seedlings have for several years obtained such great success.

It is the result of crossing *C. Spicerianum* ♀ and *C.* × *vernixium* ♂. The latter is itself a hybrid between *C. Argus* and *C. villosum*, which fact enables us to judge pretty nearly the qualities of *C.* × *Claudii*, and in fact we find in the flower the effect of all these three influences. It is remarkable for the elegance of the dorsal sepal, which in shape recalls *C. Spicerianum*, but the colour is very charming. The basal part is clear green, the median nerve is marked by a broad blackish purple band, and on either side of it extends a series of fine bright purple parallel lines which extend towards the summit. The petals are broad, drooping, and recall those of *C. villosum*, but they are of a shining reddish brown, with a darker median band, and the basal part clear green, covered with minute blackish spots.

C. × *Claudii* obtained a First-class Diploma of Honour at a Meeting of the ORCHIDÉENNE, of Brussels, in February last.

* * *

C. × *Lathamianum* is more ancient, and dates from 1880. It was obtained by Mr W. B. Latham, Curator of the Birmingham Botanic Garden, to whom it was dedicated by Reichenbach.

It was obtained from *C. Spicerianum* ♀ and *C. villosum* ♂, and is well intermediate between the two parents. It has the general shape of the latter, which it much resembles in the lower part of the flower, while in the dorsal sepal it recalls the former. This organ is white, with a dark purple median band, green at the base with some rose-purple lines which extend towards the summit. The petals are of a pretty shining yellow, with a dark median line, and the margin undulated towards the base; the apical half much broader and of a darker yellow-brown than the basal one. The lip is much like that of *C. villosum*, but of a bright yellow-brown colour.

The same hybrid has been raised by M. Bleu, and exhibited by him in 1891 under the name of *C.* × *Spicero-villosum*.

The flower figured in our plate is considered as a superior variety, and is remarkable for its size and the beauty of its colour. It obtained a First-class Certificate of Merit at a Meeting of the Orchidéenne in February last, under the name of *C.* × *Lathamianum var. Lindeni*.

*
* *

C. × *Weathersianum* is descended from *C.* × *Leeanum superbum* crossed with the pollen of *C. hirsutissimum*, and flowered for the first time in February last, at the Horticulture Internationale. It is dedicated to Mr. P. Weathers, the representative of this Society in England, and brother of the assistant secretary of the Royal Horticultural Society, of London.

This hybrid belongs also to the rich family of *C. Spicerianum*, from which *C.* × *Leeanum* was obtained.

It is quite intermediate between its two parents, and possesses a remarkable elegance. The dorsal sepal is oblong in shape, with the margins reflexed near the base. The colour is white, with the lower third clear green, and bearing reddish purple longitudinal lines, forming a very graceful effect, with a median line of dark purple, as in nearly all the descendents of *C. Spicerianum*. The petals recall those of *C. hirsutissimum*, but are less enlarged at their extremities, more deflexed, and more elegant in appearance. The lip is vinous purple.

MAXILLARIA STRIATA ROLFE

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCXCVIII.

MAXILLARIA STRIATA ROLFE.

THE STRIPED MAXILLARIA.

MAXILLARIA. Vide *Lindenia,* Engl. ed., vol. IV, p. 37.

Maxillaria striata. Pseudobulbi oblongi, subcompressi, 6-8 cm, longi. Folia recurva, lineari-oblonga, subobtusa, 30-35 cm. longa, 4-6 cm. lata. Scapi erecti, 30 cm. alti, erecti, vaginis spathaceis tecti. Bracteae ovato-lanceolatae, sabacutae. Sepalum posticum oblongo-lanceolatum, subacutum, 7 cm. longum, 1 cm. latum; lateralia subfalcata, basi latiora, apice subattenuata; mentum subconicum, 2 cm. longum. Petala lineari-lanceolata, acuta, subfalcata, 5 cm. longa, 1 cm. lata, Labellum basi attenuatum, dein triangulo-ovatum, undulatum, apice recurvum, obtusum; callo oblongo, carnoso, apice rotundato. Columna clavata, 2 cm. longa.

Maxillaria striata ROLFE in *Orchid Review,* I, p. 266. — *Journ. des Orch.,* IV, pp. 200, 201, fig. 64.

The species of this rather extensive genus do not as a rule find much favour among cultivators of Orchids, though there are several exceptions, principally among the large-flowered kinds, such as *M. grandiflora*, *M. luteo-alba*, *M. venusta*, and especially the handsome *M. Sanderiana*. The present species is the latest addition to the group. It is a native of Peru, and was introduced to cultivation by Messrs LINDEN, L'HORTICULTURE INTERNATIONALE, Brussels, in whose establishment it flowered for the first time in August last.

In shape it is about intermediate between *M. grandiflora* and *M. venusta*, having the lip somewhat like the first-named, but the segments much longer and more attenuated, in which respect it approaches the latter, though the flowers are larger than in either. The sepals and petals are regularly striped with reddish-purple lines on a greenish yellow ground, while the lip is white with radiating purple lines on the sides. It is very distinct, and a welcome addition to the group, as its flowers are large and attractively coloured. The name is given in allusion to the striped flowers.

The Maxillarias are plants of very easy culture, and for the most part very floriferous. Most of them can be grown in the cool house, like Odontoglossums, though a few species, which grow at lower elevations, like a little more heat. They should be planted in well-drained pots, the compost consisting of fibrous peat and sphagnum moss. During the growing season they require a liberal supply of water, and during the winter the compost should not be allowed to become dry, though the amount of water should be much reduced at this period.

Besides the species mentioned above, a considerable number of others are scattered about in various collections, and, as many of them are both pretty and very floriferous, it is a wonder that they are not more generally cultivated. The

reason probably is that we have a plethora of showier things, and as only a limited number can be grown, the Maxillarias do not always find a place. The present one, however, deserves a place wherever Maxillarias are grown.

R. A. Rolfe.

ORCHID CULTURE IN BELGIUM AND IN ENGLAND.

(Extract from the *Gardeners' Chronicle*, November 25)

The letter which Mr. Watson, the well-known assistant-curator at the Royal Gardens, Kew, contributed to a recent number of the *Gardeners' Chronicle*, seems to convey the idea that in commenting upon certain methods of Orchid culture pursued in England, and which seem to me less well understood in that country than in Belgium, I have not rated the English gardeners at their right value. It was before the publication of Mr. Watson's letter, which appeared in your issue of the 11th of this month, that I published in my *Journal des Orchidées* on November 1, the following commendation of his compatriots and his country : — " There are in England a great number of excellent gardeners. A visit to any horticultural exhibition shows that, for there may be seen unrivalled specimens of all classes of plants. Personally, I admire England with its scientific institutions, which are the first in the world, both as regards the progress in science and their excellent organisation ; for instance, the gardens at Kew and their cultural achievements, their eminent botanists and wonderful herbarium. I admire the English horticultural press, so generally useful, so progressive ; also the unrivalled private collections and fine horticultural establishments of this great and noble country. " I should not like any one to attribute to me in England, where I have many friends, or elsewhere, any opinion which I do not really hold, and I am no " Chauviniste. "

I must further remark that I am only alluding to Orchids in the article to which Mr. Watson alludes, the English are so superior in other branches of horticulture that they may well yield to us in this. Mr. Watson makes a very true remark concerning the special modes of cultivation peculiar to the respective countries. But then he writes : — " Certainly the Orchids generally in M. Linden's establishment are splendidly grown. I have never seen such fine collections of Odontoglossums, Masdevallias, Vandas, and Cattleyas anywhere. " If he believes that these results are due to the fact that our ground is situated between the Luxembourg station and the Parc Léopold, I think he is making a little mistake. I know him to be too skillful and experienced not to have noticed that if our cultivation of Orchids is so good it is because we endeavour to give

(*To be followed on p.* 33.)

CATTLEYA ACLANDIAE LINDL. var. SALMONEA HORT.

A. Goossens pinx. P. De Pannemaeker chrom.

PL. CCCIX.

CATTLEYA ACLANDIAE LINDL. var. SALMONEA HORT.

LADY ACLAND'S CATTLEYA, SALMON-COLOURED VARIETY.

CATTLEYA. Vide *Lindenia*, Engl. ed., vol. I, p. 7.
Cattleya Aclandia. Vide *Lindenia*, Engl. ed., vol. IV, p. 23.
Var. salmonea. Varietas sepalis petalisque salmoneo-rubris atropurpureo maculatis.

Some time ago the typical form of this charming little Cattleya was figured in the *Lindenia*, t. 346, when its history, affinities, geographical distribution and culture were treated in some detail. As is well known, the flowers are subject to some variation as regards colour, and the present variety is one which appeared in one of the recent importations of the HORTICULTURE INTERNATIONALE, Brussels, in which establishment it flowered some time ago. It chiefly differs from the type in having the ground-colour of the flower of a salmon-red tint, and thus contrasts effectively with the lighter-coloured forms. It is a very handsome variety.

R. A. ROLFE.

(Continued from page 32.)

our plants an artificial climate like that of the regions whence they come. If our Odontoglossums and Masdevallias surprise our visitors so much, is is because in the houses which are assigned to them by us, they have as much *air*, *light*, *coolness*, *and moisture*, as on the high Cordilleras. These methods are pursued in accordance with the instructions of M. J. LINDEN, my father, who brought back from his long exploratory travels accurate observations. We have simulated the climate of the Cordilleras as closely as possible, only the mountains are lacking. This is the reason why no collector returning from Columbia but exclaims on entering our alpine plant-houses, that he could believe himself again among the Columbian mountains. This MM. CLAES and BUNGEROTH told me two months ago, and so M. EDOUARD KLABOCH, who has just travelled for us, said to me a week ago. I do not experience the same feeling in the Odontoglossum-houses which I have visited near London, and according to my habit of saying and writing what I think frankly, I have said so in my *Journal des Orchidées*, believing that it would be useful to such of my English friends who ask me when they visit our houses : — " But how do you grow Orchids so well ? Do you use manure ? " This last question was put to me by Mr. WATSON himself recently, and I assured

him, as I have stated many times, that we use no manure, as could easily be proved by analysing the compost. An artificial mountain climate, good and sweet potting materials, rain-water invariably used for watering, and constant attention; such are our secrets as regards the culture of Odontoglossums and Masdevallias. It is plain to me that if this same treatment were adopted in England — that is to say, that if to Orchids from the high Cordilleras were given such a climate as that to which they are by nature accustomed — success in cultivating Odontoglossums and Masdevallias would be as complete as with us. I have said that the method of cultivating them with excessive heat, insufficient ventilation, light and moisture, and on stages covered with coke, which intercept the circulation of the air, is prejudicial to plants; I repeat, that I believe these to be important matters. If the *Gardeners' Chronicle* would give me space, I would willingly contribute to it notes on our plan of cultivating Odontoglossum, Masdevallia, Vanda, Cattleya, and other species.

I could show, perhaps, in these articles that the difference in the climate of England and Belgium is of little importance as regards plant-growing under glass, and that it is always possible to artificially modify these climates, so as to equalise them one with another. Far be it from me to think to thrust my plans on English growers. It is even very probable that in England one might grow Odontoglossums otherwise than is done in Belgium; but as I consider certain Orchids less well treated in England than here, I must say that the system of cultivation is badly arranged, that it is wanting in certain points, and that these defects should be supplied. I claim that our climate goes for nothing in the end, the proof of which is, that, as Mr. Watson himself says, there are many places in Belgium, even among our own neighbours, where cultivation is far from perfect. These persons have not yet found the " something " wanting. As to blooming, it follows necessarily that this must be fine where the vegetation is good and the pseudobulbs large and firm. Our visitors are always surprised at the size and thickness of the flower-stems of our Odontoglossums, and at the profuse blooming of most of our Orchids. Further, as I could explain in my articles, preparation for the blooming is given great importance in our system of cultivation.

Before concluding this rather long note, allow me to reciprocate Mr. Watson's compliments as paid to our establishment by saying, that on my last visit to England two months ago, I was struck with the cultural achievements in the Royal Gardens, Kew; and let me offer my hearty congratulations to the Director and Curators, as well as the managers of the collections of Baron Schröder, Mr. Measures, and Sir Trevor Lawrence — the only large amateurs' collections I had time to visit — who will receive them as coming from a cosmopolitan observer, who can appreciate fine plants wherever found, and is convinced that the word " nationality " has no importance in horticulture; that there are skilled and unskilled men everywhere, that birth-place goes for little in a man's character, and should influence (*passioner*) no one. Lucien Linden, *Brussels*, *Nov.* 14, 1893.

AGANISIA LEPIDA LIND. et RCHB. F.

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCC.

AGANISIA LEPIDA LIND. et RCHB. F.

THE ELEGANT AGANISIA.

AGANISIA. Vide *Lindenia,* Engl. ed., vol. I, p. 51.

Aganisia lepida. Terrestris. Pseudobulbi approximati, semiovoidei, apice cicatricibus foliorum dejectorum. Folia a vaginis paucis stipata, duo cuneato-ligulata, acuminata, plicata, nervosa, pollices paucos (tres usque quatuor) longa, vix unum medio lata. Pedunculus versus basin paucivaginatus, apice biflorus (certe etiam pluriflorus), racemosus. Bracteae triangulae, squamiformes, valde abbreviatae. Sepalum posticum cuneato-obovatum, acutum; lateralia oblonga, apiculata, recta. Labellum ungue lato foveato; lamina hastato-sagittata, oblonga, acuta; callus transversus, semilunatus gibberosus ante basin, apice excurrens in lineas tres carinatas, quarum externae divaricatae. Columna postica circa androclinium angulata; alis ascendentibus rhombeis; rostello brevissime tridentato basi sulcis quaternis longitudinalibus in juga quina diversa, quorum externa brevissima; internum longissimum. Anthera depressa oblonga acuta postice gibberosa, valvulis in pagina inferiori geminis; glandula triangula, ascendens; ovarium pedicellatum, violaceum. Flos albus. Carinae labelli flavae. Columnae pars inferior pulchre violacea.

Hab. Ex ditione Rio Negri, Brasiliae, misit WALLIS.

Aganisia lepida LIND. et RCHB. F. in *Nov. Act. Nat. Cur.,* XXXV, ii (1876), p. 15, t. 5.

The genus Aganisia forms a small but very interesting little group, though for various reasons the species do not seem to obtain a permanent footing in gardens. *A. cyanea* perhaps forms an exception, as its large and beautiful lilac-blue flowers are to be found in certain collections at the proper season, though this is a rare plant in cultivation, besides which it is often considered as forming a distinct genus, being the *Acacallis cyanea* of LINDLEY.

Aganisia ionoptera has also re-appeared in cultivation during recent years. It is a pretty little species, which was figured at t. 287 of the present work. Besides which two or three other species are occasionally met with, chiefly in botanical collections.

The present species is a very pretty little plant, which was introduced to cultivation as long ago as 1865, though it was soon afterwards lost sight of, and has only quite recently re-appeared. It is a native of the Rio Negro district in Brazil, where it was met with by WALLIS, who sent living plants to M. LINDEN; and these, as already indicated, flowered in 1865, when a figure was given by REICHENBACH, in his *Xenia Orchidacea.*

To Messrs LINDEN, L'HORTICULTURE INTERNATIONALE, Brussels, we are indebted for its re-introduction. It flowered in their establishment in August last, and was exhibited at a meeting of the ORCHIDÉENNE, when it was awarded a first-class *Diplôme d'honneur.*

It is a charming plant, as the annexed plate will show, its large white flowers being very effective. The keels are yellow and the lower part of the column violet, the rest of the flower being white.

It is much to be hoped that its culture is now better understood than when originally introduced nearly thirty years ago, for this seems to have been the difficulty with it. None of the group have a good record in this respect, which is rather unfortunate in the case of a plant like the present. Being a terrestrial plant and from a low elevation, it should be placed in the warm house, and liberally watered during the growing season. If more were known of the precise conditions under which some of these plants occur in their native homes, there would be a much better chance of success, as many failures are not so much due to the impossibility of imitating the essential conditions under which they grow as from want of information as to their requirements. Many Orchids which were formerly considerable intractable are now easily grown, simply because their requirements are now better understood. A few carefully conducted experiments with some of these difficult plants would probably lead to some useful results.

R. A. Rolfe.

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PART XXXV. DECEMBER 1893.

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CONTENTS :

	Pages
Aerides Lawrenceae Rchb. f.	37
Cattleya Eldorado Lind. var. Treyeranae L. Lind.	39
Catasetum Imschootianum L. Lind. et Cogn.	41
Cypripedium philippinense Rchb. f.	43

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AERIDES LAWRENCEAE RCHB. F.

PL. CCCCI.

AERIDES LAWRENCEAE RCHB F.

LADY LAWRENCE'S AERIDES.

AERIDES. Vide *Lindenia,* Engl. ed., vol. II, p. 41.

Aerides Lawrenceae. Folia lineari-oblonga, inaequaliter biloba, recurva, 20–30 cm. longa, 3,5–5 cm. lata. Racemi elongati, penduli, densiflori. Flores speciosi. Sepala orbiculari-oblonga, obtusa, lateralia multo latiora. Petala sepalis similia. Labellum profunde trilobum, lobis lateralibus dolabriformibus denticulatis erectis apice incurvis, intermedio ligulato emarginato v. obtuso latere recurvo crispulo-denticulato, calcari conico subobtuso incurvo, carinula trilobula antice inclusa callis geminis crassis postice. Columna brevissima.

Aerides Lawrenceae RCHB. F. in *Gard. Chron.*, 1883, ii, p. 460. — WARN. & WILL. *Orchid Album,* VI, t. 270.— *The Garden*, XXXV, p. 484, t. 702. — VEITCH *Man. Orch. Pl.,* VII, p. 71, cum xyl.

Var. Sanderianum. — *Aerides Sanderianum* RCHB. F. in *Gard. Chron.,* 1884, ii, p. 134. — *A. Lawrenceae Sander's subvariety*, VEITCH *Man. Orch.*, VII, p. 72, cum xyl.

Var. Amesianum SANDER ex KRANZL. in *Gard. Chron.,* 1891, II, p. 393. — *Xenia Orchid.*, III, p. 94, t. 252.

The beautiful *Aërides Lawrenceae*, one of the finest species of the genus, is a native of the Philippine Islands, whence it was introduced, in 1883, through their collector RÖBELIN. Its habitat is said to be in south-east Mindanao, where it is abundant, especially, around Duvao, growing on trees in light shade, or sometimes quite exposed. It is said to be often associated with *Vanda Sanderiana* and *Phalaenopsis Sanderiana*, in some cases even growing on the same tree. *Aërides Roebelinii* also grows in the same district, if not actually intermixed with it.

It is allied to *A. odoratum* LOUR., though a much finer plant in every respect, with larger flowers, differently shaped side-lobes to the lip, and a longer spur. It was described by REICHENBACH, who dedicated it to Lady LAWRENCE, wife of Sir TREVOR LAWRENCE, Bart., President of the Royal Horticultural Society. It is stated in the original description that a plant of it was secured by Sir TREVOR LAWRENCE at STEVENS' Rooms, after a spirited competition, for the sum of two-hundred and thirty-five guineas, then one of the highest prices ever paid for an Orchid.

A plant subsequently described as *A. Sanderianum* RCHB., was imported at the same time, and from the same locality, and is certainly nothing more than a variety of *A. Lawrenceae* with a little more yellow in the ground colour of the flowers. The leaves are also said to be a little narrower, but it is uncertain if this character can be relied on. The variety *Amesianum* is a later introduction, which is said to have rather shorter and more rigid leaves. It is therefore clear that the species is somewhat variable, as was only to be expected.

Aërides Lawrenceae is a robust plant, with gracefully recurved leaves from

9 to 12 inches long by 1 ½ to 2 inches broad. The racemes are usually longer than the leaves, and bear numerous, large and highly fragrant, wax-like flowers. The sepals and petals are white with a rich amethyst-purple blotch at the apex. The lip is also white, except the front lobe, which is bright amethyst-purple, and the spur, which is green. It is a very beautiful species.

R. A. Rolfe.

CATTLEYA ELDORADO LIND. var. TREYERANAE L. LIND.

A. Go[illegible] pin. J. Goffart [illegible]

PL. CCCCII.

CATTLEYA ELDORADO LIND. var. TREYERANAE L. LIND.

CATTLEYA ELDORADO, Mrs. D. TREYERAN'S VARIETY.

CATTLEYA. Vide *Lindenia*, Engl. ed., vol. I, p. 5.
Cattleya Eldorado. Vide *Lindenia*, Engl. ed., vol. I, p. 47.
Var. Treyerani. L. LIND., supra.

The *Lindenia* has already figured several varieties of this beautiful species, one of the most useful and of the most variable in the genus. The wide range of these forms, however, is not nearly exhausted, and whilst limiting our work to the most remarkable between them, we are yet in a state to offer the picture of several new varieties.

The one we now figure is of a very distinct character, and deserves a prominent place in the species. In our opinion, it could even be considered a natural hybrid between *C. Eldorado* and *C. chocoensis;* its remarkably large petals, their particular habit, the pale rosy lilac colour of the petals and sepals, closely recall the latter species, while the petals are far more spreading and the flower has a better appearance. The lip, very large, is of the same rosy lilac colour as the other segments, and bears beyond the throat a rich orange-coloured spot, with darker streaks.

This superb variety was exhibited at a meeting of L'ORCHIDÉENNE, of Brussels, on October 12 last, where it was awarded a First-class Certificate of merit.

It is dedicated to Mrs. D. TREYERAN, the wife of the distinguished orchidist of Bordeaux, in whose collection it is now included.

ORCHIDS AND ORCHID CULTIVATORS IN ENGLAND AND BELGIUM.

I have read with great interest the views expressed on the one hand by the nurserymen, and on the other by botanists, respecting Orchid culture in Belgium and in this country; and as Orchid grower I would contribute my experience. Having cultivated Orchids here and in Belgium, I may be excused for making a few remarks on the subject. M. Lucien Linden, in the *Journal des Orchidées*, shows that he has excellent ideas as to the natural requirements of Orchids, a practical knowledge of their cultivation, and of the beneficial results of scientific methods of ventilation of the house in which they are grown, affording water, and of the benefits of sunlight. I fully agree with him that open stages are better for the plants than closed stages covered with moisture-retaining materials. But in attempting to draw a comparison between our own cultivators and the Belgians as regards the methods employed and general treatment, M. Lucien Linden treads on dangerous ground so far as Orchid growing is concerned, because there are really no comparisons to be drawn....

That the climatic and other conditions, not only of a country, but of a locality, greatly aid, or are inimical to, the cultivation of plants, is too well known to need further proof from me. Hundreds of instances could be quoted regarding all kinds of plants, and I am continually noticing that some species of Orchid do better in one part than in another, notwithstanding the careful cultivation bestowed on those which do not succeed. For instance, *Odontoglossum Alexandrae* (*crispum*) succeeds in Belgium better than it does in England.

An English Orchid-grower may go to Belgium, and try to grow *Odontoglossum Alexandrae*, and he will meet with universal success, and grow them better than he could at home. A Belgian grower may come to England, he may also know how to grow them in his own country, but he will not meet with uniform success, and will not grow this species so well as at home. This is a fact which I have proved, and seen proved. Too much importance should not be attributed to slight variations of methods and treatment, nor to the structure, nor to the size of the ventilators. The clever Orchid cultivator is he who grows the plants well under adverse climatic conditions, and in ill-adapted structures, with insufficient ventilation, bad light, etc. He will vary the treatment according to the prevailing conditions, and give the utmost amount of attention to the needs of the plants, and it follows that there is no secret in cultivating Orchids, neither in England nor in Belgium — it is a simple matter of attention.

(*To be followed on p.* 42.)

CATASETUM IMSCHOOTIANUM L. LIND. et COGN.

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCCIII.

CATASETUM IMSCHOOTIANUM L. LIND. et COGN.

M. A. VAN IMSCHOOT'S CATASETUM.

CATASETUM. Vide *Lindenia,* Engl. ed., vol. I, p. 7.

Catasetum Imschootianum. Pseudobulbis robustis, oblongo-fusiformibus, leviter compressis, transverse obscure annulatis; foliis majusculis, late oblongo-ligulatis, acutis; racemis multifloris; floribus majusculis, pallide flavis; sepalis petalisque tenuiter membranaceis mollibusque, erecto-patulis, late obovatis, 11-13 nerviis, sepalo dorsali obtusiusculo caeteris acutis; labello carnosulo, saccato, lobis lateralibus late rotundatis, margine denticulatis intus leviter replicatis, lobo terminali crasse carnoso et rigido, apice subtruncato intus valde replicato; columna breviuscula, subrecta clinandrio valde obliquo postice longiuscule rostrato, antennis aequilongis parallelibus antice leviter arcuatis.

Catasetum Imschootianum L. LIND. et COGN. in *Journ. des Orch.,* 4me année, p. 266 (1893).—*The Orchid Review* I, p. 362.

Crescit in Brasilia.

This new species, which bears the name of Mr ALFRED VAN IMSCHOOT, the well-known Belgian Orchidist, has stout, bright green, oblong-fusiform pseudobulbs, slightly compressed so as to offer an elliptical section, obscurely marked with five or six transverse rings, 6 1/2 to 8 inches long, 1 3/4 to 2 inches thick at their middle. Leaves more or less spreading, reflexed, ligulate oblong, acute, nearly trinerved, the last at the base usually no more than 5 3/4 to 6 inches long, but the apical ones attaining 20 inches in length and 3 1/2 in breadth. Spikes multiflorous. Pedicel and ovary of a pale, somewhat greenish yellow. Sepals and petals of a very pale, somewhat greenish yellow, very thin and flaccid, all spreading and straightened towards the apex of the flower, rather concave, obovate, 11 to 13 nerved, acute, excepting the dorsal sepal, which is very obtuse, 12 tot 13 1/2 lines long, 7 to 7 1/2 broad. Lip of a soft yellow turning to a dark brown at the apex, somewhat fleshy, broadly dilated into a pouch; side lobes large, broadly rounded, enclosing loosely the column, with the margins denticulate and somewhat turned inward, and a little prominent or obscure midrib; frontal lobe only very fleshy and rigid, nearly truncate and strongly folded inward. Column very pale yellow, nearly straight, obtusely triquetrous, 5 inches long; clinandrium very oblique, rather long, elongated in a beak backwards; the two antennae yellowish, parallel and of the same length, projecting forward in the pouch of the labellum, only curved toward their apex, 7-7 1/2 lines long. The pollinia were already absent of the flowers which we have studied.

This species has the general habit of *C. Hookeri* LINDL., its nearest ally, though the later can be distinguished by numerous points, having considerably smaller pseudobulbs, with a perfectly circular section, and well-marked, blackish-brown rings, narrower leaves (2 3/4 to 3 1/4 lines broad) with numerous nerves;

somewhat larger flowers, wholly of a rich light green, oblong, considerably longer and narrower sepals, the dorsal one with seven nerves only; ovate and somewhat obtuse petals; a far more fleshy lip, with smaller, obtuse side lobes, each bearing a stout midrib, and an acute and erect front lobe; a longer column (8 ½ to 9 lines long) with far more curved antennae.

C. Imschootianum is a new and distinct addition to the series of curious forms already known in the strange genus Catasetum, of which the present work has figured the more remarkable species in the preceding volumes. It has been introduced from Brazil by L'Horticulture Internationale, of Brussels, through their collector Mr. Fl. Claes. A plant shown at a meeting of L'Orchidéenne, on November 19 last, bore several dense spikes of thirty to thirty-five flowers; it was awarded a First-class Diploma of Honour.

A. Cogniaux.

(Continued from page 40.)

I think that Orchids in general do as well in the one country as in the other, but *Odontoglossum Alexandrae* is an exception. Clearly, the Belgian has the advantage in the climatic and other conditions; at the same time, I cannot say what those conditions exactly are, being merely a cultivator of Orchids. It may be that the air is purer, or it may also be that it is less pure than in these islands. My opinion is, that the climate is better adapted for Orchids, the air containing some kind of nourishment for *Odontoglossum Alexandrae* in Belgium which is lacking here. In the former country the atmosphere is charged with the gases arising from decaying animal and vegetable matter, and this is not so in England, at least to the same extent; and in my humble opinion, and especially in and near large towns, the air is impregnated to a high degree with chemical gases instead.

The soil in that part of Belgium where I resided (Ghent) is pure sand, and it consequently absorbs and gives off moisture very rapidly. The gardens and fields must be manured for each crop, otherwise the returns will be small. The manure is thrown over the land in a liquid form, and is, of course, quick in its action on plants. The principal manure used is night-soil, which is collected at midnight by tens of thousands of carts kept for the purpose, and it is taken from the towns to all parts. The crops obtained are marvellous—better than any I have seen on the best English loams. The value of this fertilising agent is known in Belgium, and made use of; it is also known in England, but the system of drainage employed by us diverts it into the sewers, often to the enormous detriment of our streams. The question is, if our sewerage system will not eventually prove to be a costly blunder and a national calamity.

(To be followed on p. 44.)

CYPRIPEDIUM PHILIPPINENSE RCHB. F.

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCCIV.

CYPRIPEDIUM PHILIPPINENSE RCHB. F.

THE PHILIPPINE CYPRIPEDIUM.

CYPRIPEDIUM. Vide *Lindenia,* Engl. ed., vol. I, p. 31.

Cypripedium philippinense. Folia disticha, linearia, subobtusa, coriacea, viridia. Scapus erectus, pubescens, 3-5 florus. Bracteae ovatae, acutae. Sepalum posticum ovatum, acutum, lateralia connata postico conformia. Petala sepalis quadruplo longiora, linearia, contorta, pendula, prope basin ciliata, undulata, glandulifera. Labellum oblongum, parvum. Staminodium subcordatum, emarginatum, convexum, margine pubescens.

Cypripedium philippinense RCHB. F. in *Bonplandia* (1862), p. 335. — VEITCH *Man. Orch.,* IV, pp. 42, 43, cum xyl. — *Garden and Forest,* 1890, pp. 308, 309, fig. 43.

Cypripedium laevigatum, BATEM. in *Bot. Mag.,* t. 5508. — Id. in *Gard. Chron.,* 1865, p. 914, fig. a. — *Fl. Mag.,* 1866, t. 298. — *Belg. Hort.,* XVII, p. 102, t. 6. — *Fl. des Serres,* t. 1760-1.

Cypripedium Roebelinii RCHB. F. in *Gard. Chron.,* 1883, ii, p. 684.

Cypripedium philippinense was originally described in 1862 from a dried specimen collected in the Philippine Islands, the collector not being recorded. Two years afterwards it was introduced by the late Mr. JOHN GOULD VEITCH, who had journeyed to the Philippines with the object of obtaining, among other Orchids, *Vanda Batemanii.* The discovery has thus been recorded : — " He had long searched in vain for this plant, and had almost began to despair of ever meeting with it, when one day running his boat ashore on the south-west side of the small island of Guimaras, he found the rocks by the coast covered with hugh masses of the plant of which he was in search, and at the same time he found this Cypripedium growing on its roots. " Plants were sent home, which flowered for the first time in Europe in March 1865, when Mr. BATEMAN, evidently unaware of its previous discovery, described it under the name of *C. laevigatum*, under which name it was long known in gardens.

In 1883, a plant which had been collected by RÖBELIN, probably in the island of Mindanao, was described by REICHENBACH under the name of *C. Roebelinii*, but it has proved to be only a form of the above-named species. It has since been met with in one or two other Philippine localities, and the later introductions have shown some slight variation from the original, though all are evidently forms of the same species.

It belongs to the group with racemose flowers and is perhaps most nearly allied to *C. praestans* RCHB. F., from New Guinea. REICHENBACH compared it with *C. glanduliferum* BLUME, another New Guinea species not yet introduced to cultivation. These two New Guinea species have since been considered synonymous, but from BLUME's careful analytical drawings, they are evidently quite distinct in several essential details.

C. philippinense has been utilised by the hybridists on several occasions. For example, *C.* × *selligerum* Rchb. f. was obtained from it and *C. barbatum* Lindl.; *C.* × *Vipani* had *C. niveum* Rchb. f., for the other parent; *C. Berenice* Rolfe was derived from *C. philippinense* and *C. Lowii* Lindl., while *C.* × *Alfred* N. E. Br., is descended from *C. philippinense* and *C. venustum* Wall. And there are two or three other interesting hybrids partly derived from the same species.

R. A. Rolfe.

(*Continued from p.* 42.)

I think the air in Belgium must be rich in nutritive matters which are good for vegetation, and perhaps for mankind. But what about the water? a plentiful supply of which is found to be a few feet from the surface, not hard, as ours often is, but quite as good and sometimes better for plants than rain-water.

Nicotine, the poisonous property of tobacco, is generally acknowledged to be a useful agent in killing plant pests, and tobacco being cheap in Belgium, the leaves are strawn under the stages, and the fumes that arise from them effectually destroy thrips in a manner much more efficient than ours, which often ruins the plants of *Odontoglossum Alexandrae*. I have also the notion that the vapour from these leaves impart vigour to the plants....

(Burberry, in *The Gardeners' Chronicle,* January 13, 1894.)

The matter referred-to in the preceding article is a very interesting one; we do not agree with several of Mr Burberry's statements, and propose to answer him in a next number.

L. L.

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PART XXXVI. JANUARY 1894.

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CONTENTS :

	Pages
Chondrorhyncha Chestertoni Rchb. f. . . .	45
Catasetum Rodigasianum Rolfe var. tenebrosum Rolfe	47
Cypripedium × Lawrebel Hort.	49
Cypripedium × conco-Lawre Hort. . . .	51

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CHONDRORHYNCHA CHESTERTONI RCHB. F.

A. Goossens pinx. P. De Pannemacker chrom.

PL. CCCCV.

CHONDRORHYNCHA CHESTERTONI RCHB. F.

M. CHESTERTON'S CHONDRORHYNCHA.

CHONDRORHYNCHA. Sepala subaequilonga, anguste oblonga, posticum basi columnae adnatum, concavum, carinatum, lateralia basi obliqua, pedi brevissimo columnae adnata. Petala sepalis multo latiora, obovato-oblonga. Labellum cum pede columnae articulatum, sessile, latum, erectum, concavum, indivisum, basi intus callo tridentato instructum. Columna semiteres, superne utrinque dilatata, basi in pedem brevissimum producta; clinandrium valde obliquum, integrum. Anthera terminalis, opercularis, incumbens, unilocularis; pollinia 4, cerea, angusta, acuminata, per paria sibimet incumbentia, postice minora, inappendiculata, anthera dehiscente stipiti crasso affixa, glandula molli.

Herbae epiphyticae, caulibus brevissimis plurifoliatis non pseudobulbosis. Folia oblonga, plicato-venosa, in petiolum contracta. Scapus e rhizomate simplex, paucivaginatus, flore unico majusculo.

Species 4, Columbianae.

Chondrorhyncha LINDL. *Orch. Linden.*, p. 12. — BENTH. et HOOK. F. *Gen. Plant.*, III, p. 548.

Chondrorhyncha Chestertoni. Affinis *C. fimbriatae* RCHB. F., sepalis angustioribus, lateralibus acuminatis; petalis a basi cuneato-ligulatis longe fimbriatis; labello cuneato oblongo pandurato emarginato lobulato fimbriato, callo ante basin, antice tridentato, area incrassata utrinque, dentes non attingente. Flores flavi. Nova Granada. Det. CHESTERTON.

Chondrorhyncha Chestertoni RCHB. F. in *Gard. Chron.*, 1879, ii, p. 648.

The above is REICHENBACH's diagnosis of this rare and very imperfectly known species, published as long ago as 1879. Its further history is thus recorded : —

" This is a very remarkable Neo-Granadan discovery of Mr CHESTERTON, whose herbarium is at hand. The flower is larger than that of the well-known *Chondrorhyncha* (*Stenia*) *fimbriata*. The sepals are narrower, the lateral ones developing into a very long sharp point. The petals are narrower, with a very much developed fringe, where there are but teeth to be seen in the old species. The lip is narrower and much longer than that organ in *C. fimbriata*, with very long fringes, and the anterior part of the callus stands with its three teeth outside the thickened area, when the rather blunt callus of *C. fimbriata* stands amidst it. "

Whether the species ever passed into cultivation I do not know, but if so it must have quickly disappeared, for I fail to trace any further record about it. But it has now been introduced by Messrs LINDEN, L'HORTICULTURE INTERNATIONALE, Brussels, and we may hope that so beautiful a thing will secure a permanent place in our collections, as the cultivation of these cool Orchids is now so much better understood, and the allied *C. Lendyana* RCHB. F., has been successfully treated at Glasnevin, and elsewhere. It would be well, however, not to be too sanguine, for REICHENBACH, speaking of the allied *C. fimbriata*, in SAUNDERS' *Refugium Botanicum*, II, t. 107, remarked : —

" There is no doubt that the plant is very curious, nor that it will have

disappeared in a very short time from all our collections. M. Van Branteghem, of Brussels, the skilful grower of cool Orchids, informs me that it is very difficult and capricious. " Mr Wilson Saunders, on the other hand, declares that " placed in a cool shady house it grows freely, and produces its flowers very regularly, when potted in spongy peat and sphagnum and carefully drained. "

Botanically it is allied to *Warscewiczella* and other genera, one of whose peculiarities is that of not producing pseudobulbs, and these have ever proved difficult to cultivate successfully in Europe. One great difficulty is the want of information as to the precise conditions under which they grow in a wild state. If these were accurately known it is probable that some of the difficulties would vanish, as cultivators have been to a great extent experimenting in the dark. Successful methods are sometimes hit upon under these circumstances, though too frequently after long periods of disastrous failure, which a little correct information might have prevented. In the culture of this species the conditions mentioned by Mr Wilson Saunders, as above cited, should be closely followed.

R. A. Rolfe.

CATASETUM RODIGASIANUM ROLFE var. TENEBROSUM ROLFE

A. Goossens pinx. P. De Pannemaeker chrom.

PL. CCCCVI.

CATASETUM RODIGASIANUM ROLFE var. TENEBROSUM ROLFE.

M. RODIGAS'S CATASETUM, DARK VARIETY.

CATASETUM. Vide *Lindenia,* Engl. ed., vol. I, p. 15.

Catasetum Rodigasianum. Pseudobulbo fusiformi crasso, foliis lanceolatis acutis plicatis 1 pedem longis, scapo suberecto arcuato, racemo 1 pedem longo multifloro, bracteis lanceolatis acutis 6 lin. longis, sepalis reflexis late lanceolatis acutis concavis 1 1/3 poll. longis, petalis similibus erectis convexis, labello carnoso concavo late ovato 6 lin. longo 9 lin. lato, apice breviter trilobo, lobis lateralibus subrotundis fimbriato-dentatis, apice paullo divergentibus, columna clavata cirrhis subparallelibus.

Catasetum Rodigasianum ROLFE in *Lindenia,* VI, p. 41, t. 259.

Var. tenebrosum ROLFE *supra*.

A few years ago *Catasetum Rodigasianum* was described, at t. 259 of the present work. The species had been introduced from the province of Santa Catherina, South Brazil, by Messrs LINDEN, and flowered in their establishment. It also appeared in one or two English collections about the same time. The species is characterised by its arching raceme of numerous flowers, with the sepals and petals green, spotted with dark brown, and a concave broadly ovate tridentate yellowish lip, with many small brown spots.

In July, 1892, another form appeared in the same establishment, which, though obviously nearly allied, was at first thought to be distinct, though the two are so similar in structural details that they are probably only forms of one and the same species. A comparison of the two plates will show this. In the present one the sepals are almost suffused with dark purple-brown; the petals are green with several large deep purple-brown blotches, and the lip buff suffused with light brown on the base and margins. The column is deep green, spotted with dark purple-brown, and the antenuae parallel at the base but afterwards diverging. There are some small structural differences in the lip, but Catasetums, even of the same sex, are notoriously variable. It is also believed to be of Brazilian origin. Those who have plants of it should look out for the appearance of female flowers, which sooner or later will probably make their appearance, as in the case of several other species. A great deal still remains to be discovered before our knowledge of this interesting genus is complete.

R. A. ROLFE.

THE FORTY-NINTH MEETING OF THE "ORCHIDÉENNE."

The 49th Meeting, held on February 11th, surpassed in richness the preceding one, which was so much admired. The amateurs contributed in brillant fashion and sent the principal pearls of their collections. Nearly all of the 140 Orchids exhibited deserve special mention, and nearly all would have obtained awards if the Jury had not decided to raise them to the same level as the quality of the exhibits, and thus render them less readily attainable. The fashionable visitors who thronged to the exhibition which followed the Meeting greatly admired the plants, forming superb groups in the middle of the large central gallery of the HORTICULTURE INTERNATIONALE, transformed in very picturesque fashion, and which was also a great success.

We must be content with citing very briefly, among the plants exhibited :

Odontoglossum Rosii maximum, with gigantic flowers, beautifully coloured and blotched with bright brown; *O. Cervantesii decorum,* also very large and tinted in charming fashion; *O.* × *Coradinei, Laelia anceps Dawsoni,* bearing numerous flowers almost entirely white, *Cypripedium Sallieri Hyeanum* and *C. Boxallii atratum,* two strong clumps well flowered, and *Maxillaria sp.*, from M. G. WAROCQUÉ;

The magnificent *Odontoglossum* × *Harvengtense* (*crispum* × *sceptrum*) resembling much *O.* × *excellens var. Dellense,* but the colour more clear and, according to many, more beautiful than this gem of Baron SCHRÖDER's collection; the charming *Cypripedium* × *Niobe, C. Argus Moensii,* well flowered; *Cattleya Trianae,* in very dark varieties and of superior culture; *Dendrobium* × *Leechianum,* with very large flowers; *Pleurothallis Roezlii,* a little known species covered with flowers of dark garnet-colour, and which was certificated as much for its merit as for its beautiful flowering, and the beautiful *Odontoglossum* × *Rückeri,* from M. comte DE BOUSIES;

The superb series of fourteen varieties of *Cattleya Trianae,* the colours varied and also remarkable, from M. D. TREYERAN;

Dendrochilum glumaceum, an enormous tuft richly flowered and deliciously perfumed, from M. CAHUZAC, who was present at the meeting, and was called by the members of the Jury to preside over their deliberations;

The beautiful flowers of Odontoglossum hybrids and *O. baphicanthum,* sent by M. FINET, but unfortunately rather injured by the journey and the bad weather;

The superb *Odontoglossum* × *Impératrice de Russie* (*Halli* × *polyxanthum*), well intermediate between the two parents, and *Odontoglossum crispum Dallemagneae,* an excellent variety, from M. DALLEMAGNE;

The beautiful *Dendrobium nobile nobilius,* the charming *Odontoglossum Hunnewellianum,* and *Cattleya guttata Prinzii,* well flowered, from M. A. VAN IMSCHOOT;

The superb *Cattleya Trianae,* with flowers very large and richly coloured, the remarkable collection of *Odontoglossum crispum, Rückerianum, Andersonianum, Rossii* and *Pescatorei, O. Edwardi, Lycaste Skinneri,* well coloured; *Cypripedium* × *Harrisianum superbum,* a very large and very dark form; *C. Lawrenceanum nigrum, C.* × *Ashburtoniae Imschootianum,* the dorsal sepal large and bearing a broad white border at the apex; *C. Boxallii atratum,* remarkably dark; *C.* × *Leeanum,* and many interesting hybrids; *Laelia anceps Ballantineana,* with white sepals and petals, from M. MADOUX;

The very interesting exhibit of M. A. BLEU, comprising *Vanda Cathcarti,* with large and beautiful flowers, and two excellent hybrid Cypripedium, *C.* × *Iris* and *C.* × *amethystinum;*

(*To be continued on p.* 50.)

CYPRIPEDIUM × LAWREBEL HORT.

PL. CCCCVII.

CYPRIPEDIUM × LAWREBEL HORT.

CYPRIPEDIUM. Vide *Lindenia*, Engl. ed., vol. I, p. 31.

Cypripedium × *Lawrebel*. Hybridum inter *Cypripedium Lawrenceanum* ♀ et *C. bellatulum* ♂ artificiose productum.

Cypripedium × *Lawrebel* HORT. *Gard. Chron.*, 1892, i, pp. 502 (Lawrebellum), 560, 561, fig. 82 (Laurebel). — *Journ. Hort.*, 1892, i, p. 294, 295, fig. 50 (Lawrebel). — *Orchid Review*, I, pp. 15, 351, 359.

The superb hybrid figured in the annexed plate was raised in the collection of Sir TREVOR LAWRENCE, Bart., Burford, Dorking, from *Cypripedium Lawrenceanum* crossed with the pollen of *C. bellatulum*. It was exhibited at a meeting of the Royal Horticultural Society on April 12th., 1892, when it was deservedly awarded a First-class Certificate, under the name of *C.* × *Lawrebellum*. It was described in the *Gardeners' Chronicle* as « a most beautiful thing with flowers shaped more like those of *C. Lawrenceanum* than the other parent. The whole flower was of a rich rosy crimson, with a tinge of green at the base of the sepals and petals, and a pure white margin to the upper sepal. The petals were spotted with chocolate colour and there were numerous purplish-brown lines radiating from the base of the upper sepal. Foliage like some forms of *C. Lawrenceanum*, but with the markings closer or smaller in pattern. " Shortly afterwards it was figured in the same work as *C.* × *Laurebel*. The name is an abbreviated form of the combined names of the two parent species, at first used with the Latin termination, but afterwards changed into the vernacular, though it is not clear why it should have been written with the letter " u, " instead of " w, " in the latter form, unless by a slip.

A number of plants were raised, which, as is usual in the case of hybrids, have shown some degree of variation between themselves, some of them inclining most to the characters of *C. Lawrenceanum*, and others to those of *C. bellatulum*. The first which flowered produced a single-flowered scape, but with increased strength some of them have developed twin-flowered ones. One of them also produced a flower in which the lateral sepals were free, as recorded in the *Orchid Review*, I, p. 351.

It is a robust grower, as might be inferred from the character of the two parent species, and the flowers are large and very handsome, as may be seen in the annexed plate, which has been taken from materials kindly communicated by Sir TREVOR LAWRENCE. Another inflorescence now before me, from the same source, bears two flowers, the lower one with the dorsal sepal 2 $^1/_4$ inches across, and the petals 2 $^1/_2$ inches long by 1 inch broad, the upper one slightly smaller. They show an unmistakeable combination of characters derived from the two parents, though the seed parent seems to have exerted the stronger influence as

regards colour, the characteristic markings of that species being stronghy developed on the dorsal sepal of the hybrid. The petals and lip are stronghy suffused with the same peculiar stade of rosy-purple, the former showing numerous small blackish brown spots near the base, and a few larger ones along the nerves. The general shape of the flower may be described as about intermediate between that of the two parents, with the staminode almost like that of *C. Lawrenceanum*.

Altogether it is a most beautiful hybrid and a great acquisition in a group which has produced many sterling novelties during the last few years, and from which still more may be anticipated in the immediate future.

R. A. Rolfe.

(*Continued from p.* 48.)

Dendrochilum glumaceum, a strong clump well flowered; the beautiful *Cypripedium* × *Pauli eximium,* the dorsal sepal richly spotted; *Coelogyne cristata alba* and *Dendrochilum glumaceum validum,* from M. G. Miteau;

The superb *Cattleya Wambekeana,* having the sepals and petals bright rose spotted with dark purple at the tips, and the lip of a beautiful sombre reddish purple, from M. Ch. Van Wambeke;

Cattleya labiata, in pretty varieties, from M. Vanderborght;

The magnificent *Maxillaria mirabilis,* a new species coloured with a very rich mixture of bright yellow and red; *Dendrobium Wardianum Lindeniae,* with flowers entirely white, except a yellow blotch in the throat of the lip; the rare *Masdevallia Schroederiana,* offering in its colour a beautiful contrast of white and violet purple; *Brassia Finetiana, Eria sp., Odontoglossum crispum, O.* × *Coradinei grandiflorum, Cattleya Trianae splendens* and *Phalaenopsis grandiflora alba,* from M. Linden;

Lycaste Skinneri, brightly coloured, and *Odontoglossum Rossii,* well flowered, from M. du Trieu de Terdonck;

A charming *Cypripedium hybrid,* from Dr Capart;

The beautiful *Cattleya Trianae,* comprising many dark varieties and one very pale, nearly white, from Dr Van Cauwelaert;

The excellent *Cypripedium* × *Leeanum Simonei, C.* × *Leeanum Veitchii, C.* × *Seegerianum,* very analogous with *C. polystigmaticum; Dendrobium nobile majus,* of beautiful bright colour; *Coelogyne cristata Lemoniana,* with a citron yellow blotch; from M. Stepman;

Odontoglossum Edwardii, bearing two groups of elegantly coloured flowers, from M. A. Wincqz.

The Jury, composed of MM. Cahuzac, President, de Bosschere, Secretary, J. Linden, G. Warocqué, Comte de Bousies, Dr Capart, Houzeau de Lehaie, Huybrechts, Em. Rodigas, du Trieu de Terdonck, A. Van Imschoot, Ch. Van Wambeke, and Ch. Vasseur, made the following awards: —

First-class Diplomas of Honour

To *Maxillaria mirabilis,* from M. Linden, *unanimously and by acclamation;*

Odontoglossum × *Harvengtense,* from M. Comte de Bousies, *unanimously and by acclamation;*

Cattleya Wambekeana, from M. Van Wambeke, *unanimously and by acclamation;*

(*To be continued on p.* 52.)

CYPRIPEDIUM × CONCO-LAWRE HORT.

PL. CCCCVIII.

CYPRIPEDIUM × CONCO-LAWRE HORT.

CYPRIPEDIUM. Vide *Lindenia*, Engl. ed., vol. I, p. 31.

Cypripedium × *conco-Lawre.* Hybridum inter *Cypripedium concolor* ♀ et *C. Lawrenceanum* ♂ artificiose productum.

Cypripedium × *conco-Lawre* HORT. *Gard. Chron.*, 1893, i, p. 206. — *Journ. Hort.*, 1893, i, p. 193, fig. 41. — *Orchid Review*, I, pp. 15, 94, 351.

In an article descriptive of the fine collection of Sir TREVOR LAWRENCE, Bart., Burford, Darking, published in the *Orchid Review* (vol. I, p. 15), speaking of hybrid Cypripediums, the following note occurs : " Yet another, which may reasonably be expected to be a fine hybrid, is *C. concolor* crossed with the pollen of *C. Lawrenceanum*. Its flowers are nearly open. In habit it resembles *C. concolor*, but the foliage is longer, broader, and more mottled. It should prove equal or superior to the beautiful *C.* × *tessellatum porphyreum*, which was derived from *C. concolor* ♀ and *C. barbatum* ♂. " Shortly afterwards, on February 14 th., 1893, it was exhibited at a meeting of the Royal Horticultural Society, under the name of *C.* × *conco-Lawre*, and received an Award of Merit, when it was further noted (p. 94) — " the flowers are creamy white speckled with rose, and somewhat resemble those of *C.* × *Marshallianum*. " A woodcut was given in the pages of the *Journal of Horticulture*, as above cited. The scape was two-flowered, the uppermost flower not being expanded. On October 10th. following it was again exhibited, on this occasion showing two flowers fused together, like Siamese twins, which excited much comment from lovers of the curious.

It is a decidedly handsome hybrid, as the annexed plate, which was prepared from materials kindly forwarded by Sir TREVOR LAWRENCE, will show. In general habit it most resembles the seed parent, also in the colour of the flowers, though in shape they are more nearly intermediate between the two parents. The dorsal sepal is very broadly ovate, light creamy yellow lightly suffused and veined with light purple. The petals are oblong and rather broad, similar to the dorsal sepal in colour, with the addition of a few light rose-purple spots, chiefly on the basal half. The lip is about intermediate in shape, light creamy yellow in colour with some darker veins, and the staminode most like that of *C. Lawrenceanum*.

It is a charming and delicately coloured hybrid, which can best be compared with the beautiful *C.* × *Marshallianum*, a hybrid derived from *C. venustum pardinum* ♀ and *C. concolor* ♂. Hybrids derived from *C. concolor* and its allies,

C. niveum and *C. bellatulum*, are almost without exception elegant little plants, and from the number of unflowered seedlings in various collections, a considerable accession to their ranks may be anticipated during the next few years.

R. A. Rolfe.

(*Concluded from page* 50.)

Odontoglossum Impératrice de Russie, from M. Dallemagne, *unanimously*;
Dendrobium Wardianum Lindeniae (*album*), from M. Linden, *unanimously*.

First-class Certificates of Merit

To *Cypripedium* × *Harrisianum superbum*, from M. Madoux, *unanimously*;
Odontoglossum Ruckeri, from M. Comte de Bousies;
Odontoglossum Rossii maximum, from M. G. Warocqué;
Odontoglossum Ruckeri, from M. Madoux;
A group of *Cattleya Trianae*, from M. Treyeran;
Vanda Cathcartii, from M. Bleu;
Odontoglossum Rückeri, from M. Madoux;
A group of *Odontoglossum crispum*, from M. Madoux;
Laelia anceps Dawsoni, from M. Warocqué;
Cypripedium × *Iris*, from M. Bleu;
Cypripedium × *Niobe*, from M. comte de Bousies;
Cypripedium × *Paulii eximium*, from M. Miteau;
Cattleya Trianae, from Dr Van Cauwelaert;
Odontoglossum crispum, from M. Madoux;
Cattleya Trianae, from M. Madoux;
Cattleya Trianae, from M. Madoux.

Second-class Certificates of Merit

To *Cattleya Trianae*, from M. Comte de Bousies;
Cattleya Trianae, from M. Comte de Bousies;
Masdevallia Schroederiana, from M. Linden;
Cypripedium × *Leeanum Simonei*, from M. Stepman;
Cattleya Trianae, from M. Comte de Bousies.

First-class Cultural Certificates

To *Cypripedium Boxallii atratum*, from M. Warocqué;
Pleurothallis Roezlii, from M. Comte de Bousies;
Cypripedium Sallieri Hyeanum, from M. Warocqué;
Dendrochilum glumaceum, from M. Cahuzac.

Second-class Cultural Certificates

To *Dendrochilum glumaceum*, from M. Miteau.

INDEX OF CONTENTS.

PART VI.

PLATES		PAGES
401	Aerides Lawrenceae Rchb. f.	37
400	Aganisia lepida Lind. et Rchb. f.	35
403	Catasetum Imschootianum L. Lind. et Cogn.	41
406	Catasetum Rodigasianum Rolfe var. tenebrosum Rolfe.	47
402	Cattleya Eldorado Lind. var. Treyeranae L. Lind.	39
399	Cattleya Aclandiae Lindl. var. salmonea Hort.	33
395	Cattleya velutina Rchb. f.	25
405	Chondrorhyncha Chestertoni Rchb. f.	45
389	Cymbidium grandiflorum Griff. var. punctatum Cogn.	13
392	Cymbidium Lowianum Rchb. f.	19
397	Cypripedium × Claudii L. Lind.	29
408	Cypripedium × conco-Lawre Hort.	51
397	Cypripedium × Lathamianum Rchb. f.	29
407	Cypripedium × Lawrebel Hort.	49
404	Cypripedium philippinense Rchb. f.	43
397	Cypripedium × Weathersianum L. Lind.	29
391	Galeandra Claesii Cogn.	17
385	Laelia purpurata Lindl. var. fastuosa Lind.	5
386	Laelio-Cattleya × eximia Hort.	7
394	Lycaste cinnabarina Rolfe.	23
387	Masdevallia × Pourbaixi Hort.	9
398	Maxillaria striata Rolfe.	31
388	Odontoglossum Thompsonianum Garnier.	11
390	Odontoglossum Triomphe de Rambouillet Hort.	15
396	Vanda tricolor Lindl. var. Hoveae L. Lind.	27
393	Zygopetalum grandiflorum Hemsl.	21

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PART XXXVII-XXXVIII. FEBRUARY-MARCH 1894.

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CONTENTS :

	Pages
Cattleya Eldorado Lind. var. Oweni Hort.	5
Cattleya Eldorado Lind. var. Lindeni Hort.	5
Lycaste × Imschootiana L. Lind. et Cogn.	7
Cypripedium Dallemagnei Hort.	9
Lycaste Luciani Van Imsch. et Cogn. . . .	11
Laelio-Cattleya × elegans Rolfe var. leucotata Hort.	13
Cypripedium insigne Wallich var. montanum	15
Laelia × juvenilis Bleu.	17
Odontoglossum crispum Lindl. var. waltonense Hort.	19

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VII.

1894.

Mo. Bot. Garden,
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AL
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CATTLEYA ELDORADO LIND. var. LINDENI HORT.

CATTLEYA ELDORADO LIND. var. OWENI HORT.

A. Goossens, direx. J. Goffart chrom.

PL. CCCCIX.

CATTLEYA ELDORADO LIND. var. OWENI HORT.
CATTLEYA ELDORADO LIND. var. LINDENI HORT.

CATTLEYA. Vide *Lindenia*, Engl. ed., vol. I, p. 7.
Cattleya Eldorado. Vide *Lindenia*, Engl. ed., VI, p. 39.
Var. Oweni HORT. *Journal des Orchidées*, IV, p. 245.
Var. Lindeni HORT., *supra*.

The *Lindenia* has already published in preceding volumes some distinct and remarkable varieties of this magnificent species, and more recently still the rich variety *C. E. Treyeranae*.

The two forms figured in our present plate are equally deserving to be enumerated among the most beautiful which this species has produced.

C. Eldorado Oweni is a superb form with white sepals and petals, and the lip also nearly entirely white, except the orange blotch in the throat, and a broad transverse band of bright rosy crimson across the front margin of the lip.

This distinct variety was exhibited with great success at the horticultural meetings in Brussels and London on October 8th. and 10th. 1893. A First-class Certificate of Merit was given by the Jury of the ORCHIDÉENNE, and an Award of Merit by that of the Royal Horticultural Society.

It is dedicated to G. D. OWEN, Esq, of Rotherham, the possessor of the rich collection of which we have already had occasion to speak, and of which it now forms a part.

C. Eldorado Lindeni forms a curious and brilliant contrast with the preceding by the bright rose colour of its flowers. The petals, which are large and well displayed, are spotted with reddish purple at their extremities. The lip has the throat and disc deep yellow or light orange, while the anterior border bears a rich deep reddish purple blotch, extending nearly to the margins of the lateral lobes.

C. Eldorado Lindeni, like the preceding, was exhibited at the Meeting of the ORCHIDÉENNE on October 8th., 1893, and was unanimously awarded a First-class Certificate of Merit.

THE FIFTIETH MEETING OF THE "ORCHIDÉENNE"

The 50th meeting, held on March 11th, was the occasion of a stirring and very beautiful manifestation. A certain number of the members of the ORCHIDÉENNE conceived the idea of holding a special fete to celebrate the fiftieth monthly exhibition of the Society, and in honour of one of the original founders, M. J. LINDEN, one of the honorary presidents, and the secretary of the committee, M. L. LINDEN, Director of the Society L'HORTICULTURE INTERNATIONALE.

A large number of amateurs and eminent botanists and horticulturists, members of the ORCHIDÉENNE, assembled on Sunday morning in the winter garden of the establishment; among them, MM. GEORGES WAROCQUÉ, Comte DE BOUSIES, Dr CAPART, W. THOMPSON, the great English amateur; RAOUL WAROCQUÉ, F. KEGELJAN, M. CAHUZAC, O'BRIEN, the eminent English Orchidist, A. COGNIAUX, DE LA DEVANSAYE, BOUTEMY-BARROIS, HOUZEAU DE LEHAIE, A. VAN IMSCHOOT, CH. VAN WAMBEKE, J. DU TRIEU DE TERDONCK, ÉM. RODIGAS, FL. PAUWELS, CH. DE BOSSCHERE, MADOUX, G. MITEAU, HUYBRECHTS, A. DE MEULENAERE, A. WINCQZ, H. KNIGHT, Director of the Royal Gardens at Laeken.

Two superb bouquets of Orchids were presented to Messrs J. and LUCIEN LINDEN on their arrival, also two large frames containing the photographs of all the subscribers to this graceful memorial, to the number of 70, of whom many were not able to be at Brussels. Then M. F. KEGELJAN, in an eloquent address, explained the sentiments which had inspired the organisers of this fete, sentiments of gratitude for the services rendered to science and to the diffusion of a taste for Orchids, and sentiments of sympathetic solidarity between all amateurs devoted to the same cause. M. J. LINDEN returned thanks in his name and that of his son in a touching manner.

A delegation composed of the foremen and gardeners of the HORTICULTURE INTERNATIONALE then advanced and presented bouquets to Messrs J. and LUCIEN LINDEN, to whom they expressed their felicitations and sentiments of gratitude. M. LUCIEN LINDEN thanked them, in a few appropriate words, and alluded to the cultural progress made by these devoted servants.

The Jury then proceeded to pass in review the plants exhibited. These numbered 133, but our space is unfortunately too limited to give more than a summary description. The list of awards, which will be found below, includes the names of the most remarkable among them.

M. G. WAROCQUÉ exhibited his famous *Odontoglossum crispum leopardinum*, very richly spotted, and rather analogous in the colouring to *O. Wilckeanum albens*, but with more numerous and more elegant brown spots; a superb *Cochlioda Nötzliana*, with very large flowers of a good substance; *Cypripedium Rothschildianum*, with two spikes, each bearing three flowers of enormous size; *C. barbatum Crossii*, a fine specimen loaded with flowers; *Odontoglossum Edwardii* with two long, very dense spikes; *Cattleya amethystoglossa*, well flowered, *Trichopilia suavis*, of a beautiful colour, etc.

M. Count DE BOUSIES showed some beautiful Odontoglossums, amongst which a magnificent *O. crispum*, with flowers of a perfect shape, and bearing on each part a

(*To be continued on p.* 10.)

LYCASTE × IMSCHOOTIANA L. LIND. et COGN.

PL. CCCCX.

LYCASTE × IMSCHOOTIANA L. LIND. et COGN.

M. A. VAN IMSCHOOT'S LYCASTE

LYCASTE. Vide *Lindenia,* Engl. ed., vol. III, p. 13.

Lycaste × *Imschootiana.* Pseudobulbis late triangulari-ovoideis, compressis, longitudinaliter obscure sulcatis; foliis late lanceolatis, inferne longe attenuatis conduplicatis; scapo teretiusculo, gracili, flexuoso, sparse paucivaginato; vaginis laxis, triangularibus, acutissimis; bractea ovato-lanceolata, acuta, ovario breviore; sepalis inferne erectis deinde patulis, subplanis margine leviter involutis, anguste ovatis, basi intus longiuscule denseque villosis caeteris glabris, dorsali obtuso vix apiculato, lateralibus paulo majoribus acutis subacuminatisque; petalis erecto patulis, satis concavis, ovato-ellipticis, acutis, inferne intus pilosulis, caeteris glabris, sepalo dorsali paulo brevioribus, labello petalis satis, breviore, erecto, valde concavo, carnoso rigidoque, ambitu ovato, basi non unguiculato, lobis lateralibus apice late rotundatis, lobo terminali reflexo ovato apice rotundato margine crispo intus tenuissime denseque papilloso, disco ad basim extus profunde depresso intus gibboso ad medium intus sparse longeque piloso, callo inter lobis lateralibus crasso apice rotundato; columna longiuscula, subrecta, antice longiuscule denseque villosa, basi in pedem brevem producta.

Lycaste × *Imschootiana* L. LIND. et COGN. in *Journ. des Orchid.,* 4me année, p. 328, fig. 72 (1894); *Journ. of Hortic.,* 21 déc. 1893, p. 549 et 557, fig. 80; *Gard. Chron.,* 23 déc. 1893, p. 775, fig. 119; *The Orchid Review,* II, p. 8 et 30; *Rev. de l'Hortic. Belg.,* XX, p. 47.

The new hybrid we now figure is dedicated to M. ALFRED VAN IMSCHOOT, of Ghent, who raised it in his collection by fertilizing the *Lycaste Skinneri* with the pollen of *Maxillaria nigrescens*.

Its pseudobulbs are ovoid, rather enlarged at the base, obscurely keeled, greyish green with some silky reflections, 7 to 8 cm. thick. Considering the plant now under examination, each pseudobulb bears three light green, soft, plicate-nerved, rather wavy leaves, attaining 55 cm. in length and 14 cm. in breath. The scape, 12 to 15 cm. long, is of a pale green, slender, flexuose, cylindric; it bears usually two lax, membranaceous vaginae, brownish red, very acute, 2 1/2 cm. long, with the edges soldered below to half their height; a third bract-like vagina is split nearly to the base, and shorter than the ovary. The sepals erect towards the base, are then spreading, nearly plane, narrowly ovate, with rather long and dense hairs at the interior base, very pale yellow with very numerous large, dark purple dots; the dorsal one, obtuse and scarcely apiculate, is 5 1/2 cm. long and 3 cm. broad; the lateral ones, acute and somewhat acuminate, are 6 cm. long and 32 mm. broad. The petals are erect and somewhat spreading upwards, rather concave, ovate-elliptic, acute, somewhat villose in front towards their base, pale yellow, with large dots of a dark red rather rare at their upper half, but very numerous and nearly confluent at their basal half, 5 cm. long, 2 1/2 cm. broad. The lip is erect, very concave, rather fleshy and rigid, 4 cm. long, very dark purple, with small yellow spots in

series at the upper part, and the front lobe citron yellow; the latter is somewhat reflexed, ovate with rounded tip, as in the lateral lobes, and somewhat wavy-crisped edges; externally, the disk bears at its base a broad and deep depression. The column, 2 cm. long, is nearly straight, lemon-yellow at its upper part, passing into purple below, nearly black in front at the base; the whole front part is very villose, especially near the foot, which is rather short. The opercule of the anther is very convex, very finely papillose, unilocular, of a somewhat yellowish white. The rather large pollinia are provided with a slender and elongated pedicel, and bear all the other usual characters of Lycaste.

Some persons have showed themselves unwilling to admit the above parentage of this hybrid and especially the influence of *Maxillaria nigrescens*, and designated *Lycaste Skinneri* and *L. cruenta* as the probable parents. The plant has undoubtedly maintained absolutely all the characters of the genus Lycaste, in the vegetative organs as well as in its floral structure, and bears some resemblance to *L. cruenta* in more than one part. Is there one person, however, who may boast to know at present all the mysteries of hybridization, and who could say what surprises we are to encounter in the future?

In order to be more acquainted with the origin of the *L. Imschootiana*, we asked M. Van Imschoot himself for information, and he kindly wrote to us the following : —

" ....About the *Lycaste Imschootiana*, I made but one hybridization of Lycaste at the beginning of 1889, viz. *L. Skinneri* fertilized with the pollinia of *Maxillaria nigrescens*. I can therefore positively assert that the *M. nigrescens* is the pollen-parent, although there is scarcely one distinct character of this species in the hybrid, but perhaps in the lip.

I obtained five or six plants of the seeds; the first flowered and the more robust you have received; two or three of the others will probably flower next year about at the same time, i. e. December-January, as they begin to push a new growth. "

So long, therefore, as we have no proof of the contrary, in other words, so long as there exists no identical plant obtained from other parents, we are not allowed to call in question such a categorical affirmation.

In all cases, a fact is beyond doubt, viz., that the *L. Imschootiana* is a plant of superior merit. All the horticultural periodicals have mentioned its appearence, and several of them have given a figure of it. True it is that it obtained but an Award of Merit from the Royal Horticultural Society of London, but the Orchidéenne, of Brussels, awarded to it a First-class Diploma of Honour unanimously and by acclamation.

A. Cogniaux.

CYPRIPEDIUM × DALLEMAGNEI HORT.

PL. CCCCXI.

CYPRIPEDIUM × DALLEMAGNEI HORT.

M. DALLEMAGNE'S CYPRIPEDIUM.

CYPRIPEDIUM. Vide *Lindenia*, Engl. ed., I, p. 31.
Cypripedium × *Dallemagnei* HORT., *supra*.

The new hybrid figured in the present plate was obtained from the fertilisation of *C. Spicerianum* with the pollen of *C. Lowianum*.

We see that the hybrid is about intermediate between its parents, having much of the elegance of *C. Spicerianum*, both in form and colour, but in size somewhat approaching *C. Lowianum*.

The character which gives to *C.* × *Dallemagnei* its particular charm is the graceful contrast produced in the centre of the flower, clear green spotted with blackish purple, and the extremities of the petals and the dorsal sepal, in which a rosy violet colour preponderates. The base of the petals and dorsal sepal are covered with numerous very curious spots. The lower third of the petals bear the same rosy violet spots as are seen in *C. Lowianum*, and they are also somewhat revolute, as in that species. The upper half of the dorsal sepal is white, set off with several large rosy purple veins. This organ has distinctly the form of *C. Spicerianum*, but is of larger dimensions. Lastly the lip, which is of average size and nearly cylindrical, is green, feebly tinted with reddish brown in front, and paler behind.

C. Dallemagnei unanimously obtained a First-class Diploma of Honour at a Meeting of the ORCHIDÉENNE, of Brussels, in November 1893.

L. L.

(*Continued from p.* 6.)

very large, light reddish-brown spot; *Cypripedium Mastersianum*, richly flowered; a superb *Cattleya Trianae*, having very large, splendidly coloured flowers, etc.

From M. CAHUZAC came a well-flowered plant of *Cymbidium Lowianum superbissimum*, a good variety, having the front lobe of the lip of an exceptionally rich colour.

W. THOMPSON Esq., Walton Grange, Stone (England), exhibited a very fine series of cut flowers, including: *Dendrobium Phalaenopsis*, some pale and some dark varieties, *D. nobile albiflorum*, *D. nobile nobilius*, *D. nobile Amesianum*, *D. Wardianum*, nearly pure white and yellow, *D.* × *Leeanum*, *D.* × *Ainsworthii*, a good form, *Cattleya Victoria-Regina*, *Odontoglossum crispum*, an excellent variety.

M. A. VAN IMSCHOOT showed two very fine *Cattleya Trianae*, especially one bearing gigantic flowers, a *Cattleya Lueddemanniana* and a charming *Cypripedium* × *Leeanum maximum*.

M. MADOUX sent a superb series of Odontoglossum *crispum*, *Rückeri*, *luteo-purpureum*, *Coradinei*, *triumphans*, *Rossii rubescens*, and *Cattleya Trianae*, in excellent varieties; several Cypripedium hybrids, very interesting, and *C. Argus Moensii*, *C.* × *selligerum*, *C.* × *Harrisianum superbum*, *C.* × *Dauthieri*, *C. barbatum majus*, *C.* × *oenanthum*, etc.; *Lycaste Luciani*, well flowered; *Mormodes Rolfeanum rubrum*, a richly coloured variety; *Cattleya Leopoldi* and *Laelia elegans var.*, also very interesting in colour.

Dr CAPART exhibited several *Odontoglossum crispum* in good varieties, of which one was particularly remarkable, and another very richly flowered; *O. Hallii* and *triumphans*, an *Oncidium superbiens*, very attractive, a *Cattleya Trianae* and a *Dendrobium nobile*, of good colour.

M. PAUWELS showed an *Odontoglossum odoratum* superbly flowered, and forming quite a bush of flowers.

M. DE LANSBERGE sent a *Phalaenopsis Schilleriana* bearing a superb branched panicle loaded with flowers.

M. POURBAIX exhibited his *Masdevallia* × *Pourbaixii*, much improved since its first flowering, a year ago. The flowers are larger, delicately coloured, and very attractive.

M. CH. VAN WAMBEKE exhibited a series of beautiful *Odontoglossum crispum* and *Cattleya Trianae*, and a *Cypripedium* × *Ashburtoniae*, a strong clump well flowered.

M. GIBEZ, of Sens, exhibited cut flowers of two hybrid Cypripedium, obtained by the regretted Mme GIBEZ: *C. villosum* × *Lowii*, and *C. venustum* × *villosum*, both well intermediate between the parents.

M. DE LOMBAERDE exhibited a very well flowered plant of *Selenipedium* × *grande*.

M. MOENS exhibited a beautiful tuft of *Dendrochilum glumaceum validum*, well flowered, and *Cypripedium* × *Stella*, a very attractive hybrid.

M. A. WINCQZ sent the following Orchids: *Cattleya Trianae* and *amethystoglossa*, *Odontoglossum crispum*, *O.* × *Andersonianum*, a good variety, and *O. Lindleyanum*.

Dr VAN CAUWELAERT exhibited a *Cattleya Trianae*, of interesting colour.

We may further mention *Odontoglossum polyxanthum* and *gloriosum*, *Zygopetalum crinitum* and *Lycaste Skinneri*, both well coloured, from M. DRAPS-DOM, also *Coelogyne cristata*, *Cypripedium* × *melanophthalmum* and *C.* × *politum*, good varieties, from M. STEPMAN.

(*To be continued on p.* 14.)

LYCASTE LUCIANI VAN IMSCH. et COGN.

PL. CCCCXII.

LYCASTE LUCIANI VAN IMSCH. et COGN.

M. LUCIEN LINDEN'S LYCASTE.

LYCASTE. Vide *Lindenia*, Engl. ed., vol. III, p. 11.

Lycaste Luciani. Pseudobulbis ovoideis, compressis, longitudinaliter distincte sulcatis; foliis magnis, late lanceolatis, inferne angustis conduplicatisque; scapo vix compresso, paulo flexuoso, sparse plurivaginato, vaginis laxis, inferioribus acutis, superioribus acuminatis; bractea ovato-lanceolata, breviter acuminata, ovario longiore; sepalis patentibus, subplanis, oblongis, obtusis et crasse apiculatis, basi intus dense araneoso pilosis, praecipue lateralibus, caeteris glabris; petalis erectis apice leviter recurvis, satis concavis, obovato-oblongis, acutiusculis, sepalo dorsali satis brevioribus; labello petalis paulo breviore, erecto, ambitu anguste obovato, breviter unguiculato, lobis lateralibus apice late rotundatis et leviter undulatis intus leviter puberulis, lobo terminali reflexo anguste ovato, inferne satis constricto, apice obtuso subrotundato intus dense villoso-tomentoso, extus brevissime denseque puberulo, disco ad medium longitudinaliter cristato, callo inter lobis lateralibus crasso integro, apice late rotundato; columna elongata, suberecta, antice inferne vix puberula superne longe denseque villosa, basi in pedem brevem producta.

Lycaste Luciani VAN IMSCH. et COGN. in *Journ. des Orch.*, 4me année, p. 361 (1894); *The Orchid Review*, II, p. 30 et 75.

L. Lucieniana HORT., *Rev. de l'Hortic. Belg.*, XX, p. 47.

L. Lucianiana HORT. *The Orchid Review*, II, p. 28.

This remarkable species is dedicated to M. LUCIEN LINDEN, director of L'HORTICULTURE INTERNATIONALE. It has ovoïd pseudobulbs, with several distinct longitudinal furrows, 7 cm. broad, each bearing four leaves on the plant which we have examined. The leaves are light green, flaccid, 70 cm. or more long, 13 to 14 cm. broad. The scape, about 3/4 inch long, is of a pleasant green, rather slender, scarcely compressed, somewhat flexuose; it bears three to four lax vaginae, yellowish green, 3 to 4 cm. broad, soldered below along their edges to about half their length; the upper one, forming a bract, is more broad, and sensibly longer than the ovary. The sepals are oblong, abruptly apiculate at their apex, nearly plane, but little concave at their basal part, of a somewhat greenish white, strongly stained and dotted of purple internally; the upper one is erect, somewhat reflexed at the apex, 7 cm. long, 24 mm. broad, somewhat villose internally at the base; the lateral ones are spreading, 7 1/2 cm. long, 2,4 cm. broad, densely covered internally at the base with a white down. The sepals are erect, with the apex somewhat rolled outside, rather concave, obovate-oblong, somewhat acute at their apex, 5 cm. long, 2 1/2 cm. broad, of a nice white, but stained and spotted with purple towards their base. The lip is erect, yellowish white, with numerous purple dots, obovate in shape, 4 1/2 cm. long and nearly 3 cm. broad at its middle; the lateral lobes are rounded and somewhat wavy at their apical margin; the anterior lobe is reflexed, of a dark purple, narrowly ovate, contracted at its base, nearly rounded at

its apex, wholly covered on its superior side with a felt cloth of long curled hairs; the claw is rather short and broad; the disk bears a thin longitudinal crest, which extends from the base to over the middle, where it becomes confounded with the large transverse callus, rounded at the upper margin. The column is straight, somewhat incurvated at the apex only, semi-cylindrical, yellowish white strongly stained with purple underneath, 2 1/2 cm. long; its anterior face bears towards the apex a long and dense villosity; the foot is scarcely 1 cm. long The opercule of the anther is very convex, thinly papillose, yellow, with two large purplish-brown lateral spots.

The curious villosity which covers the terminal lobe of the lip of *Lycaste Luciani* can only be observed in the *L. lasioglossa* Rchb. f., of which the present work has given a plate some two years ago (vol. VII, pl. 316), and to which it bears some considerable analogy; but it will be seen, on a glance at the two plates, that the species are perfectly distinct. Besides the absolutely different colouring of the flowers, we may observe that in the *L. lasioglossa*, the bract is shorter than the ovary; the sepals are considerably broader, equally long, the lateral ones regularly tapering and acute at their apex, the dorsal one only obtuse and apiculate; the petals are rather shorter and broader, obtuse at their apex; the lip is as long as the petals, with a longer and narrower claw, the lateral lobes more projecting, and the front lobe broader, with the callus of the disk bidentate at its apex; the column is about 1/2 cm. shorter, while the foot is one time longer than in the new species; lastly, the pollinia are considerably smaller, rather narrower, with the pedicel shorter and more slender.

The habitat of *Lycaste Luciani* is not known with absolute certainty; it is however extremely probable that it comes from Guatemala, for it was included in an importation of *L. Skinneri*, received three years ago by M. Alfred Van Imschoot, the well-known Orchidist of Ghent. It becomes therefore probable, as M. Van Imschoot thinks, that this plant could be a natural hybrid between *L. lasioglossa* and *L. Skinneri*, both Guatemalan Orchids.

M. Van Imschoot's plant flowered for the first time two years ago; last year, it was divided into two pieces, and gave no flower; during the last winter, one of the cuttings flowered in November, and the second in January. The first one was exhibited, on December 10th. last, at the meeting of the Orchidéenne, of Brussels, where it was awarded a First-class Diploma of Honour.

A. Cogniaux.

LAELIO-CATTLEYA × ELEGANS ROLFE var. LEUCOTATA HORT.

A. Goossens pinx. *J. Goffart chrom.*

PL. CCCCXIII.

LAELIO-CATTLEYA × ELEGANS ROLFE var. LEUCOTATA HORT.

THE ELEGANT LAELIO-CATTLEYA, WHITE VARIETY.

LAELIO-CATTLEYA. Vide *Lindenia,* Engl. ed., vol. II, p. 25.
Laelio-Cattleya elegans. Vide *Lindenia,* Engl. ed., vol. IV, p. 25.
Var. leucotata. Varietas floribus candidus.

Laelio-Cattleya × *elegans*, or *Laelia* × *elegans*, as it is customary to call it in collections, is extremely variable as regards colour. We could easily enumerate twenty described varieties which show quite appreciable differences. It is therefore the more curious that no pure white variety has previously made its appearance.

There exists, however, a variety called *alba*, but the lip is deep amethyst-purple, though the sepals and petals are white.

It is a curious fact that although the forms which are the most common in cultivation have white segments, or are but slightly suffused with rose, the majority of the distinct varieties which have appeared are characterised by a more or less dark tint, but none up to the present has shown a variation to pure white.

This blank has now been filled up, and we may congratulate ourselves, for the form which we now figure is very beautiful, and white varieties are always particularly choice.

The plant which served as the model for our plate flowered in 1893, among importations of L'HORTICULTURE INTERNATIONALE, whence it passed into the collection of R. H. MEASURES, Esq., one of the most eminent of English Orchidists.

It has the sepals and petals entirely white, also the lip, though the front lobe of this organ bears a feeble trace of pale rose.

The *Lindenia* has already published remarkable varieties of this beautiful natural hybrid, notably the rich *L.-C.* × *elegans Broomeana*, with flowers entirely crimson-purple. The new form which we publish to-day admirably completes this superb series, and is worthy to be compared with its predecessors.

L. L.

(*Continued from p.* 10.)

Nineteen exhibitors participated in this meeting. The Jury, composed of Messrs W. THOMPSON, President, DE LA DEVANSAYE, Secretary, BOUTEMY-BARROIS, Comte DE BOUSIES, CAHUZAC, JAMES O'BRIEN, G. WAROCQUÉ, F. KEGELJAN, Dr CAPART, ÉM. RODIGAS and HOUZEAU DE LEHAIE, distributed the awards with more than usual severity.

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The labours of the Jury being over, all the members present proceeded in carriages to the *Grand Hotel,* where an elegant *déjenner* was served.

The repast, which was well organised, proceeded with perfect gaity and cordiality. At desert M. le comte DE BOUSIES proposed the first toast and alluded in eloquent terms to the brilliant results obtained by the Society, and recounted the eminent services rendered to science and to horticulture by the introducer of so many magnificent species, M. J. LINDEN, and the efforts of his son to imitate so noble an example, in having made the HORTICULTURE INTERNATIONALE one of the leading establishments in the world.

M. J. LINDEN, in a speech moved with emotion, thanked the comte DE BOUSIES and the other organisers of this affecting fete, and showed, in recalling his voyages of discovery, that the love of plants, from a scientific and horticultural point of view, was an elevated and civilising passion, only calculated to develop the noble sentiments of those devoted to them and bring them together.

Cordial toasts were then proposed by Messrs LUCIEN LINDEN, CAPART, CAHUZAC, MADOUX, DE LA DEVANSAYE, O'BRIEN, DE BOSSCHERE and W. THOMPSON to the heroes of the fete, to their wives, and to the ORCHIDÉENNE.

Lastly, M. G. WAROCQUÉ, President of the ORCHIDÉENNE, in a toast filled with good grace, alluded to the part played in the progress of Belgian culture by those modest but devoted and active assistants, the "*chefs de culture.*" The toast was associated with the name of M. V. VAN MOL, principal commercial manager of the HORTICULTURE INTERNATIONALE, who was present at the banquet.

The company separated with the most agreable impressions, and expressed the desire, proposed by Dr CAPART, to see the fete renewed each year in the month of April.

On the evening of the same day all the employés of the Horticulture dined together to celebrate the fiftieth meeting of the ORCHIDÉENNE, and drank to the progress of Orchid culture and to the health of Messrs J. and LUCIEN LINDEN.

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The following is the list of awards made by the jury on this occasion.

First-class Diploma of Honour

To *Masdevallia* × *Pourbaixii,* from M. POURBAIX, *unanimously.*

First-class Certificates of Merit

To *Cattleya Trianae,* from M. A. VAN IMSCHOOT, *by acclamation;*
Cut flowers of Dendrobium and Odontoglossum, from M. W. THOMPSON, *by acclamation;*
Cattleya Trianae, from Count DE BOUSIES, *unanimously;*
Odontoglossum crispum leopardinum, from M. G. WAROCQUÉ, *unanimously;*

(*To be continued on p.* 16.)

CYPRIPEDIUM INSIGNE WALLICH var. MONTANUM

A. Goossens pinx. P. De Pannemaeker chrom.

PL. CCCCXIV.

CYPRIPEDIUM INSIGNE WALLICH var. MONTANUM.

CYPRIPEDIUM. Vide *Lindenia*, Engl. ed., I, p. 31.
Cypripedium insigne WALLICH in LINDL. *Collect. Bot.*, t. 32.

New Orchids are more popular than *Cypripedium insigne*, and the favour is well deserved, because it is a plant of the easiest possible culture, and so common as to be sold at a very cheap rate. It blooms during the winter in profusion, and its flowers remain fresh for a long period. Its form, too, is very graceful. The dorsal sepal is well displayed, and charmingly coloured, apple green from the base to the centre, and covered with larger or smaller more or less numerous brown spots. It is surrounded by a white border, sometimes much broader at the apex, and on which the spots approach violet, instead of brown, as at the base.

The species is extremely variable, and during recent years a considerable number of new and very interesting forms have appeared.

Among the old varieties two only have a great reputation, *C. insigne Maulei* (or *C. insigne albo-marginatum*), and *C. insigne Chantini* (or *C. insigne punctatum violaceum*).

C. insigne Maulei appeared in 1855, in a small importation made by Messrs HENDERSON. Its flowers were very remarkable, and the unique plant having been divided a certain number of pieces found purchasers in 1869 at the price of £ 5 each.

It has the dorsal sepal broad, but a little reflexed near the base, with a broad white border at the apex, the spots numerous and extending above the green portion, and the lip broad and long, and of a clear olive-green.

On taking a side view it is easy to distinguish *C. insigne Chantini*, because the dorsal sepal is incurved in front, while in other varieties this organ is nearly straight.

C. insigne Chantini has the dorsal sepal more expanded, and therefore appearing broader than the preceding, and distinctly rounded, green at the base, and with a broad white band at the summit, descending at the sides nearly to the base, and abundantly spotted with purple brown. The spots are often arranged in four longitudinal lines, and become violet-purple when they extend into the white region at the summit.

With the exception of these two distinct varieties of superior beauty, *C. insigne* was until recent years considered to be a very constant species, but more recently a new type has been discovered to which the name of *C. insigne montanum* has been given; and which has proved extremely rich in variations, both in form and

colour. Of this I have seen some time ago, at the HORTICULTURE INTERNATIONALE, a series of a dozen forms which have been picked out as the most remarkable among the plants which have hitherto flowered out of a large importation. One of these especially has the spots large and of a bright and remarkable colour; in another, on the contrary, they are only just visible, as a shadow, and of a brownish yellow colour.

I do not attempt here to describe all the other forms. The list would be tedious, and the reader may easily imagine all the combinations of form (dorsal sepal more or less broad, etc.) of colour (the white margin more or less broad, spots more or less numerous, variable in size, disposed in lines or scattered, etc.) and of grandeur. That which was painted and is here reproduced was one of the most remarkable for size and beauty, and indicates what may be anticipated of this celebrated species.

MAX GARNIER.

(*Continued from p.* 14.)

To *Cattleya Trianae,* from M. MADOUX, *unanimously;*
Odontoglossum crispum, from M. MADOUX, *unanimously;*
Odontoglossum crispum, from Count DE BOUSIES, *unanimously;*
Cymbidium Lowianum superbissimum, from M. CAHUZAC, *unanimously;*
Odontoglossum triumphans, from Count DE BOUSIES;
Odontoglossum crispum, from Dr CAPART;
Odontoglossum × *Molianum,* from M. LINDEN;
Cypripedium Mastersianum, from Count DE BOUSIES;
Cypripedium × *Stella,* from M. MOENS;
Odontoglossum Rückeri, from M. MADOUX;
Cypripedium hybrid (*venustum* × *villosum*), from M. GIBEZ;
Odontoglossum cirrhosum superbum, from M. LINDEN;
Lycaste Luciani, from M. MADOUX;
Cattleya Trianae, from M. MADOUX.

Second-class Certificates of Merit

To *Odontoglossum crispum,* from M. CH. VAN WAMBEKE;
Cochlioda Nötzliana, from M. G. WAROCQUÉ;
Odontoglossum × *Coradinei,* from M. MADOUX;
Mormodes Rolfeanum rubrum, from M. MADOUX;
Cattleya Trianae, from M. VAN WAMBEKE;
Cattleya Trianae, from M. MADOUX;
Odontoglossum crispum, from M. MADOUX.

First-class Cultural Certificates

To *Cypripedium Rothschildianum,* from M. WAROCQUÉ, *unanimously;*
Odontoglossum gloriosum, from M. FL. PAUWELS;
Odontoglossum crispum, from Dr CAPART;

(*To be continued on p.* 18.)

LAELIA × JUVENILIS BLEU

PL. CCCCXV.

LAELIA × JUVENILIS BLEU.

THE GRACEFUL LAELIA.

LAELIA. Vide *Lindenia,* Engl. ed., vol. I, p. 41.
Laelia juvenilis. Hybrida inter *Laelia Perrinii* ♀ et *L. pumilam* ♂ artificiose producta.
Laelia juvenilis BLEU. *Journ. des Orchidées,* I, p. 230.

This is a charming hybrid to which has been given the dainty name of *Laelia* × *juvenilis*, which it well deserves on account of its graceful colouring. It is about intermediate between its two parents in the organs of vegetation, but its flowers are much like those of *L. Perrinii*, and if one were given the choice of these two species, it would be difficult to imagine a more remarkable product. The sepals and petals are white, lightly tinted and veined along the margin with very pale rosy lilac. The lip has the tube of nearly the same colour, but the front lobe, which has much of the shape of *L. Perrinii*, only less abrupt and more graceful, has a white disk and in front of this a large blotch of deep rosy carmine.

Laelia Perrinii has already been utilised in another cross with *L. crispa*, the product being *L.* × *Pilcheriana*, a beautiful hybrid remarkable for the contrast between the colour of the sepals and petals, which are white or lightly tinted with pale rose, and the lip, which is of a brilliant reddish purple. It was *L.* × *Pilcheriana*, which, fertilised in its turn with *L. cinnabarina*, produced the beautiful *L.* × *flammea*, which is remarkable for the combination of its orange-yellow colour with purple.

With regard to *L. pumila*, it does not appear to have hitherto given rise to artificial hybrids. This is no doubt explained by the small size of its flowers; nevertheless this species has qualities which compensate for the defect, in the breadth and colour of its segments, and we shall be much surprised if it does not produce some beautiful offspring in the not distant future.

L. × *juvenilis* is another of the hybrids raised by M. A. BLEU, of Paris, the hybridist who has produced the majority of the continental hybrids. The readers of the *Lindenia* have already been able to admire several very remarkable hybrids due to his skilful initiative.

L. L.

(*Continued from p.* 16.)

To *Odontoglossum Edwardii,* from M. WAROCQUÉ;
Cypripedium barbatum Crossii, from M. WAROCQUÉ;
Phalaenopsis Schilleriana, from M. DE LANSBERGE;
Cypripedium Ashburtoniae, from M. VAN WAMBEKE;
Odontoglossum pulchellum majus, from M. WAROCQUÉ;
Cattleya amethystoglossa, from M. WAROCQUÉ;
Cattleya Trianae, from Count DE BOUSIES;
Dendrochilum glumaceum validum, from M. MOENS.

*
* *

Toast of M. J. Linden, at the banquet of 11th March.

Many persons having expressed the desire to see preserved the toast proposed by M. J. LINDEN, at the banquet of 11th. March in honour of the fiftieth Meeting of the ORCHIDÉENNE, we think it well to give the text below.

GENTLEMEN,

Extempore speaking is not easy at my age. I have seen 77 years, ten of them spent campaigning in the tropics, which count double.

In consideration of this age, you will permit me to be brief, and to talk about my early relations with our favourites, the Orchids, which are assembled here in such large numbers.

But before going further, permit me to say to M. le comte DE BOUSIES how much I am touched and affected by his kind and flattering words about me, which you have just heared. I thank you from my heart, and I pray you to accept this expression of my warmest gratitude.

I also beg the honourable members of the organising commission of this sympathetic and friendly manifestation, as well as all the honourable adherents, present and absent, to accept my thanks for the great honour which they have done me, and also my son LUCIEN, in so graciously offering us their photographs, together with this brilliant *déjeuner*. This high appreciation of services rendered, each in his sphere, to botany and horticulture, also to amateurs of Orchids, is the most valuable and agreable recompense which we could desire. The approbation of all the distinguished amateurs is more valuable for us than the highest honorary distinctions.

I will tell you a few words about myself and how I became an explorer, thus realising the desire of my dreams since childhoud. I was educated at the Faculté des Sciences of the University of Brussels, of which I am now one of the last survivors of those who were students in the first years of its foundation. In September, 1835, the Belgian Government entrusted me with a scientific mission into south America, little known at that period, and allotted me two colleagues, MM. FUNCK and GHIESBREGHT.

Our preparations were soon made, and by the end of December in the same year we landed in Brazil, after an unpleasant voyage of three months, which would now be performed in sixteen days. It was, however, only in the Cordilleras of the Venezuelan and Columbian Andes that my Orchid discoveries attained their greatest importance.

(*To be continued on p.* 20.)

ODONTOGLOSSUM CRISPUM LINDL. var. WALTONENSE HORT.

A. Goossens pinx. J. Goffart chrom.

PL. CCCCXVI.

ODONTOGLOSSUM CRISPUM LINDL. var. WALTONENSE HORT.

THE CRISPED ODONTOGLOSSUM, WALTON GRANGE VARIETY.

ODONTOGLOSSUM. Vide *Lindenia*, Engl. ed., vol. I, p. 19.
Odontoglossum crispum. Vide *Lindenia*, Engl. ed., vol. II, p. 51.
Var. Waltonense HORT., *supra*.

The handsome variety which we figure in the annexed plate is not only remarkable in colour, but is distinct in size and structure. Its flowers, which are very well formed, have the petals very finely fringed along the margins, covering the margin of the sepals, and of such large dimensions as we have seldom seen. And what is still rarer, the substance is thick, and nearly coriaceous, as we have never before observed it in *Odontoglossum crispum*.

The colour is superb, of a lilac-mauve reflected with white and bearing large bright brown blotches on the sepals and lip.

The present variety bears the name of Walton Grange, Stone, Staffordshire, the property of WILLIAM THOMPSON, Esq., who has established there his rich collection of Orchids.

This collection is specially famed for its magnificent Odontoglossums, including numerous very choice varieties.

We are particularly pleased to be able to name one of these plants in its honour, and one which by its distinct and splendid character is well worthy to bear it.

L. L.

(*Continued from p.* 18.)

From the time of ALEXANDER VON HUMBOLDT, who only indicated a few species of Orchids, up to my arrival in the Andes, the most brilliant representatives of the Cattleyas and Odontoglossums, as well as many other species of great merit, were still undiscovered. I had the good fortune to arrive first, but I was closely followed by HARTWEG, travelling for the Royal Horticultural Society of London. We met at Bogota, and it was during an excursion that we took together that we discovered, near Pacho, *Odontoglossum crispum*, which gave occasion to a trade for a value of millions during the last few years.

At the time of my journey a certain number of more or less interesting Orchids were already in cultivation in Europe. They had been imported principally from the East Indies, Brazil, and Mexico, and their introduction was due to chance, rather than to careful search.

After travelling in Brazil, I explored in succession Cuba, Mexico, the North of Guatemala, Jamaica, Venezuela and Columbia. The best years of my youth were passed in solitudes and virgin forests. In return for not being a Don Juan, whose name however I should bear in spanish language, I remember carrying off large numbers of these children of the air, which I encountered at all altitudes, up to the chilly regions near the eternal snow. They were not at all shy, and were carried off without resistance, but once in my possession, difficulties began. It was necessary to bring them down from the mountains to the port of embarcation by roads which cannot be imagined by any who have not traversed them. At that time no steamboat had yet crossed the ocean, and the poor plants had to endure the sea voyage at the bottom of the hold of a rough sailing vessel, after having waited, sometimes during more than a month, for a chance of carriage to a port near their destination. Packed like herrings in a barrel, the heat and fermentation worked sad havoc, and but few of them arrived alive.

To-day the rapid and frequent communication, together with fixed dates for the departure of the steamers, have led to the importation of Orchids in immense proportions. The number of amateurs is following this progress, and our jubilee meeting, which we celebrate to-day, furnishes a sufficient proof. Many little children of my ancient victims figure at this meeting, and you come to weave their crowns for the fiftieth time, and this makes me hope that you will pardon the indiscretions of my youthful days.

I cannot conclude without saying that my son LUCIEN has strongly seconded my work, as you have seen, because long ago I abandoned the government, and only retain the direction of the journeys of exploration, for which I preserve all my ancient ardour, which will remain, I hope, for a long time to come.

It is more agreeable, and more to my taste, not to recognise the disagreements, inevitable at the present time, of commercial competition, for do we not contemplate the conquests made by science in the world of the unknown, and do we not see that the love of plants is an elevating and civilising one, which only develops the nobler sentiments of those which follow it, and draws them near together. What better occasion can we find than our fete to-day for advancing that amiable confraternity which the taste for horticulture gives birth to among its adepts?

I conclude by lifting my glass and drinking to the health of the ORCHIDÉENNE, of its President, of the organising Committee, also to the exhibitors and all the adherents, present and absent, of this charming Orchid fete.

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PART XXXIX. APRIL 1894.

LINDENIA

ICONOGRAPHY

OF ORCHIDS

CONDUCTED BY

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THE COLOURED PORTRAITS BY

P. DE PANNEMAEKER, A. GOOSSENS and J. GOFFART.

CONTENTS :

	Pages		Pages
Maxillaria mirabilis Cogn.	21	Dendrobium Wardianum Warn. var. Lindeniae Hort.	25
Zygopetalum intermedium Lodd. var. peruvianum Rolfe	23	Odontoglossum crispum Lindl. var. Dallemagneae L. Lind.	27

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MAXILLARIA MIRABILIS COGN.

A. Goossens pinx.

J. Goffart chrom.

PL. CCCCXVII.

MAXILLARIA MIRABILIS COGN.

THE ADMIRABLE MAXILLARIA.

MAXILLARIA. Vide *Lindenia*, Engl. ed., IV. p. 37.

Maxillaria mirabilis. Pseudobulbis parvis, compressis, biconvexis; foliis recurvis, lineari-oblongis, acutis, inferne longe attenuatis; scapo erecto, gracili, vaginis majusculis subimbricatis acutissimis leviter inflatis, dorso valde carinatis, basi leviter gibbosis vestito, foliis subdimidio breviore; bractea acuta, ovario aequilonga; sepalis carnosulis, acutis, dorsali erecto, apice leviter recurvo, ovato-oblongo, dorso carinato, lateralibus paullo brevioribus inferne erectis, superne reflexis, triangularibus, basi dilatatis; mento obtuse conico; petalis ovato-oblongis, acutissimis, sepalo dorsali satis brevioribus; labello carnoso et rigido, sepalis lateralibus satis breviore, ambitu ovato, valde concavo, fere conduplicato, apice satis attenuato reflexo fere circinato, margine superiore satis crispato; disco superne brevissime denseque tomentoso, callo carnoso oblongo-ligulato, superne incrassato, apice truncato, longiuscule denseque tomentoso; columna brevi, crassa, dorso obscure angulata, basi in pedem longissimum producta.

Maxillaria mirabilis COGN. in L. LIND. *Journ. des Orchid.*, IV, p. 363 (1894); *The Orchid Review*, II, p. 75 et 92; *Rev. de l'Hortic. Belg.*, XX, p. 70; L. LIND. *Les Orchid. exot.*, p. 834.

Of all the first-rank novelties introduced during the latest years by Messrs LINDEN, L'HORTICULTURE INTERNATIONALE, Brussels, the present one is no doubt one of the most showy. It was therefore awarded a First-class Diploma of Honour unanimously and by acclamation at a meeting of L'ORCHIDÉENNE, on February 11th. last.

We are not at present allowed to divulge its habitat, but it may be surmised *a priori* that, like all its congeners, it comes from some part of tropical America.

It has small, broadly triangular-ovate pseudobulbs, compressed, rather bi-convex, 1/2 to 3/4 inch high, each bearing two leaves at its apex. The leaves are spreading-bent, linear-oblong, acute, lengthily narrowed below, about 12 inches long, excluding the sheathing part, 1 3/4-2 inches broad, the scape is ascending, slender, hardly compressed, 6-8 inches high, light green passing to blackish purple near the nodes; it bears three to four sheathing scales, of a shining green, very acute, somewhat swollen, strongly carinate at its back, somewhat prominent at its base, with the margins connate at the base along a few lines, 1 1/4-1 1/2 inches long. The bract, rather less acute than the other scales, is as long as the ovary. Sepals rather fleshy, acute, dark purple at the middle and the inferior part, but paler at the base, bright yellow at the apex, with numerous lines of a brownish purple, extending from the base nearly to the apex, and several large dark brown spots all over the superior half; the upper one is ovate-oblong, slightly keeled at the back, specially towards the apex, 1 1/3 inch long, 1/2 inch broad, erect, except at the tip, which is somewhat recurved; the lateral ones, somewhat erect at first, then regularly curved outwards, are triangular, 1 1/6 inch long, 3/4 of an inch

broad at the base. The petals, erect, excepting the tip which is spreading or reflexed, are somewhat fleshy, ovate-oblong, very acute, 1 inch long, $^2/_5$ of an inch broad, of a bright orange-yellow at their upper half, passing to very pale yellow below, with the same streaks as the sepals on the lower two thirds, and the same spots, especially on the margin, at the upper half. The lip, very fleshy and rigid, is ovate in its whole, very concave, nearly conduplicate, strongly narrowed, reflexed and rather distorted at the apex, very hairy at the upper margins, with the disk very shortly hairy at its upper part, 1 inch long; the median callus, extending from the base to somewhat above the middle, is broad, very tomentose, and terminates above in a truncate enlargement; it is wholly bright orange-yellow, with bright purple dots, very minute on the inferior part of the lateral lobes, larger at their apex and on the margin of the front lobe. The column, creamy white, is very fleshy, somewhat arched in front, obscurely angular at the back, with the edges of the clinandrium very minutely papillose; it is scarcely $^1/_3$ of an inch long, but its foot is about twice as long.

The closest allied species seems to be the *M. fucata* Rchb. f., probably a Brazilian species, which has a very different and far less rich colouring. Besides this, the latter has ovate-oblong pseudobulbs, several times longer; its leaves are lanceolate; the dorsal sepal is strongly keeled; the lateral sepals are twice as large, broadly ovate, obtuse; the petals are far smaller, oblong and far less acute; the lip differs also by several points.

It may be well to mention, in course, the extreme confusion which predominates in the genus *Maxillaria;* its species, which in number exceed notably one hundred, have been nearly all described separately and without any systematical coordination; it is nearly impossible therefore to use these descriptions for a scientific determination of the plants included. An accurate revision of the genus would be a very useful work.

A. Cogniaux.

ZYGOPETALUM INTERMEDIUM LODD. var. PERUVIANUM ROLFE

PL. CCCCXVIII.

ZYGOPETALUM INTERMEDIUM LODD. var. PERUVIANUM ROLFE.

THE INTERMEDIATE ZYGOPETALUM, PERUVIAN VARIETY.

ZYGOPETALUM. Vide *Lindenia,* Engl. ed., vol. I, p. 27.

Zygopetalum intermedium. Pseudobulbi globoso-ovoidei. Folia oblongo-lanceolata, acuta, Scapus erectus pluriflorus. Bracteae triangulo-ovatae, acutae, concavae. Flores speciosi. Sepala elliptico-oblonga, acuta. Petala sepalis similia. Labellum basi angustum, dein subito dilatatum, cordato-reniforme, emarginatum, venis venulisque plus minus velutinis; callus tumidus, bilobus, sulcatus, praesertim in sulco mediano velutino. Columna clavata.

Zygopetalum intermedium LODD. *Orch.* (1842), p. 19 (nomen). — LINDL. *Bot. Reg.*, XXX, *Misc.*, p. 9. — *Reichenbachia,* ser. I, vol. 1, p. 37, t. 15.

Eulophia Mackaiana LINDL. in *Bot. Reg.*, t. 1433.

Zygopetalum Mackayi PAXT. *Mag. Bot.*, III, p. 97, cum ic. — HARTING *Parad. Vindeb.*, p. 20, t. 34. — RCHB. F. in WALP. *Ann.*, VI, p. 661, partim.

Zygopetalum velutinum HOFFMGG *Bot. Zeit.*, 1843, p. 835.

Zygopetalum Mackayi var. intermedium VEITCH *Man. Orch.*, IX, p. 57.

Var. peruvianum ROLFE, floribus paullo minoribus.

The history of this handsome species is very much confused, as the plant is variously confounded in the books with its two allies, *Z. Mackayi* HOOK. and *Z. crinitum* LODD. It was originally figured in the *Botanical Register* for 1831, under the name of *Eulophia Mackaiana*, Dr LINDLEY then supposing it be synonymous with *Z. Mackayi* HOOK., and in reality a species of *Eulophia*. He remarks — " This most lovely species is, of all the Orchideous tribe, one of the most deserving cultivation; not only because of the size and rich colours of its flowers, but also because it succeeds well with ordinary care, and blossoms frequently. We have not seen it thriving better than in the Garden of the Horticultural Society, where it is grown in pots, filled with moss or rotten wood, and hung by wires from the rafters of the stove. " It flowered for the first time in 1828. The introducer is not stated.

Some time afterwards Messrs LODDIGES, of Hackney, obtained plants, to which they gave the name of *Z. intermedium*, presumably in allusion to its supposed relationship to *Z. Mackayi* HOOK. and *Z. crinitum* LODD. The name was adopted by LINDLEY, who failed to recognise its identity with his *Eulophia Mackaiana*, though he called it " perhaps the finest of the genus. "

PAXTON, and later HARTINGER, also figured the plant under the erronous name of *Z. Mackayi*. REICHENBACH, in WALPER'S *Annales*, united the two, but afterwards in the *Reichenbachia*, cleared up the confusion, though the old errors have since been reproduced on more than one occasion, which is not to be wondered at, considering how much they have been confused. On the other hand the plant figured at t. 216 of this work as *Z. intermedium* is *Z. crinitum*

Lodd. The three species are quite distinct. *Z. Mackayi* has rather narrow leaves and a smaller flower with nearly smooth lip. The other two have broader leaves and larger flowers, *Z. crinitum* having the lip gradually narrowed towards the base and hirsute, while in *Z. intermedium* it is suddenly dilated into a broad front lobe, and is much less hairy. All three are natives of Brazil, and it is rather curious that an allied form should occur in Peru and Bolivia, which has recently been introduced into cultivation. It has the general character of *Z. intermedium*, but a rather smaller flower, and may bear the name of *variety peruvianum*. It is figured in the annexed plate, from plants introduced by Messrs Linden, L'Horticulture Internationale, Brussels. It has also appeared in one or two other collections. It is a fairly well-marked geographical form, and was originally collected by Matthews many years ago, though, as far as I can learn, it has only recently appeared in cultivation.

R. A. Rolfe.

THE FIFTY-FIRST MEETING OF " L'ORCHIDÉENNE "

Although less remarkable than the three preceding assemblages, the 51st meeting was a very interesting one, and brought together a selection of brilliant Odontoglossums and various specimens of remarkable culture. Beautiful Orchids were exhibited to the number of 76.

We may cite the following as among the most admired : —

Oncidium superbiens var. Enaoi, having a panicle many feet in length; *Epidendrum species,* well flowered; a pretty variety of *Cattleya Trianae* and *Miltonia vexillaria*, from M. A. Van Imschoot;

Cattleya Schilleriana, bearing a group of five large and delicately coloured flowers, from M. le Comte de Bousies;

A beautiful collection of Odontoglossum varieties, a specimen of *Chysis bractescens,* and two pretty *Cypripedium hybrids,* from M. Linden;

A pretty Odontoglossum, from M. le Dr Capart;

Two beautiful Odontoglossums, from M. Albert Madoux;

A magnificent specimen of *Dendrobium thyrsiflorum,* with rich inflorescence; *Lycaste Skinneri alba, Laelia purpurata,* a superb inflorescence of *Odontoglossum hastilabium* and *Cattleya Trianae,* from M. Madoux;

Several Dendrobiums superbly flowered, from M. De Lombaerde, also two charming varieties of *Coelogyne cristata* and *Lycaste Skinneri;*

A splendid *Odontoglossum sceptrum,* with brilliant colour, much admired, from M. Cahuzac;

Some superb Odontoglossum varieties from M. de Lansberge;

Odontoglossum crispum var. maculatum, from M. le Dr Van Cauwelaert;

A beautiful plant of *Phaius grandifolius*, bearing four flower spikes, from M. Chaumont;

Two brilliant hybrid Cattleyas obtained and exhibited by M. A. Bleu, called *Cattleya* × *Parthenia gratissima* and *Cattleya* × *amethystino-superba splendens;*

An admirable variety of *Odontoglossum Pescatorei,* spotted with large purple blotches on all the segments, from M. Miteau.

All the plants were much admired by the numerous visitors which thronged the Winter Garden of the Horticulture Internationale during the two days of the Exhibition.

(*To be continued on p.* 26.)

DENDROBIUM WARDIANUM WARN. var. LINDENIAE HORT.

A. Goossens pinx.

P. De Pannemaeker chrom.

PL. CCCCXIX.

DENDROBIUM WARDIANUM WARN. var. LINDENIAE HORT.

Mr WARD'S DENDROBIUM, MADAME LINDEN'S VARIETY.

DENDROBIUM. Vide *Lindenia,* Engl. ed., vol. I, p. 37.

Dendrobium Wardianum. Vide *Lindenia*, vol. V, p. 69, t. 225.

Var. Lindeniae. Varietas floribus omnino candidis, praeter discum labelli aurantiaco-flavidum.

Var. Lindeniae HORT. *Journal des Orchidées,* vol. V, p. 8.

The history of *Dendrobium Wardianum,* one of the most beautiful and popular species of this remarkable genus, has already been traced in the fifth volume of the *Lindenia* (t. 225).

This rich species has been introduced in quantity for many years, in order to supply the wants of amateurs and those who cultivate it on a large scale for cut flowers. It is interesting to note that hitherto it has shown very few variations. Some forms are a little larger or smaller than the type, or a little darker or lighter in colour, though with regard to colour the differences observed have been very slight. The only very distinct variety known was described by REICHENBACH, in 1876, under the name of *D. Wardianum candidulum*. Its peculiarity consists in its having the sepals and petals entirely white, and the two purple-brown spots at the base of the lip much smaller than in the type.

The variety *Lindeniae*, which we figure in the annexed plate, is still more distinct and remarkable, because it is a true albinos of the species. It has flowers entirely white except that the orange-yellow blotch on the disc remains, as in the case of albinos of *Cattleya Trianae*, *C. Eldorado*, *C. labiata*, and others.

We may also announce that shortly after the appearence of this superb variety, a Belgian amateur, M. MADOUX, exhibited another very interesting one, which fairly completes the series. This form, which was exhibited at a meeting of the ORCHIDÉENNE, has the sepals and petals white, and the two spots at the base of the lip of a very curious pale colour.

The variety *Lindeniae* made its appearence at the meeting of the ORCHIDÉENNE in February 11th. 1894, when it was unanimously awarded a First-class Diploma of Honour. It has large and well developed flowers, and will not fail to be highly appreciated, as are all white varieties of typically coloured species.

It is dedicated to Madame LINDEN.

M. G.

(*Continued from p.* 24.)

The Jury, composed of MM. le comte DE BOUSIES, president, CH. DE BOSSCHERE, secretary, F. KEGELJAN, CH. VAN WAMBEKE, A. VAN IMSCHOOT, ÉM. RODIGAS, A. HUYBRECHTS and CH. VASSEUR, made the following awards : —

First-class Diplomas of Honour

To *Cattleya* × *Parthenia gratissima,* from M. A. BLEU, *unanimously;*
Cattleya × *amethystino-superba splendens,* from M. A. BLEU ;
Cymbidium eburneum var., from M. LINDEN.

First-class Certificates of Merit

To *Odontoglossum crispum var.,* from M. ALBERT MADOUX, *unanimously;*
Odontoglossum Pescatorei var., from M. G. MITEAU, *unanimously;*
Lycaste Skinneri alba, from M. MADOUX ;
Cattleya Schilleriana, from M. le comte DE BOUSIES ;
Masdevallia Roezli superba, from M. LINDEN ;
Odontoglossum crispum var., from M. LINDEN ;
Miltonia vexillaria, from M. VAN IMSCHOOT ;
Odontoglossum Cervantesi lilacinum, from M. DE LANSBERGE ;
Phaius grandifolius, from M. CHAUMONT ;
Cattleya Trianae, from M. VAN IMSCHOOT ;
Cypripedium Spicero-Lowianum, from M. LINDEN ;
Cypripedium hybride, from M. LINDEN ;
Odontoglossum sceptrum Lindeni, from M. CAHUZAC ;
Odontoglossum citrosmum album, from M. LINDEN.

First-class Cultural Certificates

To *Chysis bractescens,* from M. LINDEN, *unanimously;*
Oncidium superbiens Enaoï, from M. VAN IMSCHOOT, *unanimously;*
Dendrobium thyrsiflorum, from M. MADOUX, *unanimously;*
Epidendrum species, from M. VAN IMSCHOOT.

TOAST OF M. COMTE DE BOUSIES AT THE BANQUET OF 11th MARCH.

M. le comte DE BOUSIES proposed the first toast in the following terms : —

GENTLEMEN,

In giving me the honour to speak here in your name you have confided to me a very delicate mission, because I do not possess the eloquence necessary to discharge it properly. It is, however, so honorable and agreeable a mission that I do not for a moment hesitate to accept it.

I proceed therefore, in the name of the jury of the ORCHIDÉENNE, to offer to Messrs

(*To be continued on p.* 28.)

ODONTOGLOSSUM CRISPUM LINDL. var. DALLEMAGNEAE L. LIND.

PL. CCCCXX.

ODONTOGLOSSUM CRISPUM LINDL. var. DALLEMAGNEAE L. LIND.

ODONTOGLOSSUM CRISPUM, Mrs. DALLEMAGNE'S VARIETY.

ODONTOGLOSSUM. Vide *Lindenia,* Engl. ed., I, p. 19.
Odontoglossum crispum. Vide *Lindenia,* Engl. ed., II, p. 51.
Var. Dallemagneae L. LIND. *Journ. des Orch.,* IV, p. 361.

The variety we now figure flowered for the first time at the beginning of the present year in the fine collection of M. DALLEMAGNE, and is of a beautiful and distinct character. Its flowers bear large and regular spots, of a bright and remarkably contrasted colour. The spots on the petals are of a bright, somewhat carmine red, white those on the sepals are chestnut brown. All these blotches are large, of an irregular form, and are grouped on the centre of each segment. The lip bears a large yellow blotch, extending to two thirds of its length, and enhanced with several small spots of a bright red.

It is with a particular pleasure that I have dedicated this beautiful variety to Mrs. DALLEMAGNE, wife of the well-known orchidist, possessor of several superb Orchids which have already been figured in the present work.

The collection which M. DALLEMAGNE has founded at Rambouillet is not only cultivated on a superior way, it is also remarkably rich and contains a number of choice varieties and rare species which could scarcely be found in any other collection of the same region around Paris.

Its great value, moreover, is amply attested by numerous premiums obtained a few years since at several Exhibitions, especially at the meetings of the ORCHIDÉENNE, of Brussels, and more recently at the great Exhibition of the Société Nationale d'Horticulture de France, at Paris, where M. DALLEMAGNE sent a magnificent lot of 250 Orchids in flower, for which he was awarded the Grand Prix d'honneur, offered by the President of the French Republic.

L. L.

(*Continued from p.* 26.)

LINDEN the homage of our sentiments of gratitude and sympathy. In saying " gratitude " I but use the correct word.

Indeed, do we not owe to them those charming moments which each day we pass in our houses, in quest of a new growth, or in beholding the first appearance of a scape pushing out from the stem, or in admiring the flowering of our plants?

To whom are we indebted for these monthly reunions, so agreeable and always so amicable?

For what is known to science of this admirable family of exotic Orchids, or to our artists, of these quaint flowers with the distinguished forms they bear?

To whom, lastly, do our fellow citizens owe these superb Orchids with which they ornament their dwellings, and with which they enhance the brilliancy of their fetes?

Well, Gentlemen, I do not hesitate to speak, and you will approve it, I am certain; that much of these things we owe to Messrs LINDEN. (*Applause.*)

You know what were the ancient Orchids : A few insignificant Oncidiums with dull colours, two or three ordinary Cypripediums. All these were relegated to the most obscure spots in the houses of botanic gardens, and what houses? Ought they not rather to have been called crematory ovens, where the plants were half dead on arriving in their places, and from whence they usually departed some months after, so well dried as to be able to enter immediately and without preparation into the herbarium of the botanist.

This was pretty nearly the situation when M. LINDEN, *père,* commenced his grand voyages of exploration. It was not one of the easiest of tasks. At first the success was problematical; afterwards these distant parts which it was intended to explore, were half uncivilized and defended by a hydra with a hundred heads, of which the first represented venemous serpents, the second the yellow fever, another the *vomito negro,* and others of the kind.

Nothing deterred M. LINDEN. He braved the journeys through countries with no beaten track; he braved the heat of tropical valleys, the cold of the snows of the Cordillera, and brought back to us the magnificent golden fleece represented by our Cattleyas, our Odontoglossums, and other marvels which we admire to-day.

But this was only the first part of M. LINDEN's task. He also lived to popularise the plants with which he had endowed us. It is this part which he has now handed over to his son, M. LUCIEN LINDEN.

Thanks to the labours and intelligence of these Gentlemen, they succeeded in wresting from nature secrets of the life of the most brilliant representatives of the vegetable kingdom, and soon they filled the houses of their beautiful horticultural establishment with the verdure and the flowers, and gave them the aspect of our meadows and fields in the beautiful days of spring. Afterwards the plants discovered by M. LINDEN arrived in multitudes and were diffused throughout Europe, with the secret of their culture generously given to the four winds of publicity.

In order to give a complete idea of the progress realised, we may recall the superb establishment in which we met this morning, and which is so admirably directed by M. LUCIEN LINDEN. On entering we find first the beautiful *Lindenia,* where our beloved flowers are represented with delicacy and truth, then the excellent little *Journal des Orchidées* (*Applause*), through which are known even to the most humble amateur, the science of culture and the knowledge of progress realised. In penetrating further into the houses, so well kept and arranged, we see the most beautiful specimens of the Orchid family bearing their luxuriant inflorescence. Lastly, we admire the immense importations, received to-day from foreign parts, to-morrow to be put into cultivation, and soon reaching their consummation at a price accessible to all.

(*To be continued on p.* 30.)

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English edition

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PART XL-XLI. MAY-JUNE 1894.

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OF ORCHIDS

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THE COLOURED PORTRAITS BY

P. DE PANNEMAEKER, A. GOOSSENS and J. GOFFART.

CONTENTS :

	Pages		Pages
Cattleya Aclandiae Lindl. var. maxima Hort.	29	Cypripedium × Gibezianum L. Lind.	37
Cymbidium eburneum Lindl.	31	Cattleya Trianae Lind. et Rchb. f. var. Capartiana L. Lind.	39
Trichopilia suavis Lindl.	33	Masdevallia Davisii Rchb. f.	41
Odontoglossum cirrhosum Lindl. var. superbum Hort.	35	Laelio-Cattleya × Cauwenberghei L. Lind.	43

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CATTLEYA ACLANDIAE LINDL. var. MAXIMA HORT.

A. Goossens pinx. *J. Goffart chrom.*

PL. CCCCXXI.

CATTLEYA ACLANDIAE LINDL. var. MAXIMA HORT.

LADY ACLAND'S CATTLEYA, THE LARGEST VARIETY.

CATTLEYA. Vide *Lindenia,* Engl. ed., vol. I, p. 7.
Cattleya Aclandiae. Vide *Lindenia,* Engl. ed., vol. IV, p. 23.
Var. tigrina HORT. Flores majores, maculis magnis et tenebrosis.

Cattleya Aclandiae was figured at t. 346 of this work and the variety *salmonea* at t. 399; a second variety forms the subject of the present plate, namely var. *maxima*, which also appeared out of the same importation, received some time ago by Messrs LINDEN, L'HORTICULTURE INTERNATIONALE, Brussels. The flowers of the present one are of exceptional size and the markings large and very dark, thus forming a strong contrast with the light greenish-yellow ground. It may be considered as the finest form of the species, to which it conforms in other respects.

(*Continued from p.* 28.)

Such, Gentlemen, are the Lindenian works, works large, complete and durable, which deserve the knowledge of all the friends of horticulture, and assure the name of LINDEN a place in history. (*Applause.*)

The name has the advantage of recalling good remembrances. We know that among historical names, the most brilliant have been borne by men whose works have been ephemeral and inauspicious. How much remains of the long tracks traced round the world by fantastical conquerors? Time has covered them with dust and their memory is sullied by the memories of crimes against right, the liberties of peoples, and by the images of sanguinary hecatombs!

If the name of LINDEN is not surrounded by the palms which are sometimes so falsely awarded to military glory, it will at least have the advantage of recalling works durable and pacific. In a century, in two and more centuries, the beautiful Orchids with which the LINDEN'S have endowed us will still have the blessings of our descendants, and no repulsive or painful thought will ever attach to their marvellous lustre. (*Applause.*)

Messrs LINDEN, you have heard the applause which has several times interrupted me. It can scarcely be directed to my insufficient utterances, and only demonstrates one thing; that is, the glow of sympathy and the recollections with which we are all about to lift our glasses in your honour. And when I say this, I do not speak for those alone who are united round this table, I speak also for those innumerable Orchidists which are found everywhere, and who appear to me at the present moment to extend and mingle with ours and to repeat with us the words with which we now address you : — Thanks, Messrs LINDEN, for what you have done for horticulture; Thanks, Gentlemen, for what you have done for us. (*Prolonged applause.*)

CATTLEYA REX

Cattleya Rex is certainly a very free-flowering Orchid, and blooming at this season, is valuable in many ways. We possess six plants with thirty flowers; one is already crossed with *Laelia Schilleriana*. It is, moreover, a free grower, and a first-class Cattleya.

Extract from *The Gardeners' Chronicle,*
August 25.

H. KNIGHT, Laeken.
August 20.

CYMBIDIUM EBURNEUM LINDL.

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCCXXII.

CYMBIDIUM EBURNEUM LINDL.

THE IVORY-WHITE CYMBIDIUM.

CYMBIDIUM. Vide *Lindenia,* Engl. ed., vol. VI, p. 13.

Cymbidium eburneum. Folia disticha, anguste elongato-linearia, rigida, apice bifida, lobis acutis. Scapus foliis brevior, 1-2 florus, squamis elongatis acuminatis imbricatis tectis. Bracteae ovato-lanceolatae, acutae, parvae. Flores speciosi. Sepala oblonga v. lanceolato-oblonga, apiculata, carinata. Petala lineari-oblonga, acuta. Labellum recurvum, trilobum; lobo medio late ovato-rotundato subobtuso undulato; lateralibus rotundatis basi attenuatis; disco velutino; lamellae in unam mediam incrassatam carnosam pubescentem apice tumidam confluentes.

Cymbidium eburneum LINDL. *Bot. Reg.*, XXXIII, t. 67. — *Id.* in *Journ. Linn. Soc.*, III, p. 28. — PAXT. *Mag. Bot.*, XV, pp. 145, 146, cum ic et xyl. — *Bot. Mag.*, t. 5126. — WARN. *Sel. Orch.*, I, t. 27. — JENN. *Orch.*, t. 16. — *Gartenflora*, XXIX, p. 155, cum xyl. — *Gard. Chron.*, 1882, i, p. 496, 497, fig. 78. — *Id.*, 1884, ii, p. 77, fig. 17. — HOOK. F. *Fl. Brit. Ind.*, VI, p. 11. — VEITCH *Man. Orch.*, IX, pp. 14, 15, cum xyl. — *Wien. Ill. Gart. Zeit.*, 1887, pp. 7, 8, fig. 3-4. — *Orchidophile,* 1882, p. 296, 297, cum xyl. — *Bull. Soc. Tosc. Ort.*, 1890, p. 264, t. 11. — WARN. & WILL. *Orchid Album,* X, t. 467.

Cymbidium syringodorum GRIFF. *Notulae,* III, p. 338.

This beautiful and deservedly popular Orchid was originally figured and described by LINDLEY in the *Botanical Register*, from a specimen which flowered with Messrs LODDIGES, of Hackney, in 1847, and which they had received from the East Indies, probably from the Calcutta Botanic Garden. Four years later, the *Posthumous Papers* of the late WILLIAM GRIFFITH were published, where we find this species under the name of *C. syringodorum*, with the statement that it was discovered in November 1835, at Myrung, in the Khasia Hills, where it grows at an altitude of about 5000-6000 feet above sea-level.

For many years it remained rare in cultivation, but at length extensive importations were made and now the species is common and deservedly popular, as its beautiful and fragrant flowers are produced early in the year, and last a long time in perfection.

It is a plant of the easiest possible culture, and succeeds well in a cool shaded part of the intermediate house, in a compost composed of fibrous loam and peat, with a little coarse sand it keep it open. The pots should be rather large, as its large fleshy roots require some space to work in. They should be well drained, and the plants should be placed below the rim, so that the water will not run off the surface. As regards watering, they may be treated like an ordinary stove plant.

Cymbidium eburneum has been utilised by the hybridist on several occasions,

and two hybrids have already flowered, while other seedlings are in existence. Those which have already flowered are *C.* × *eburneo-Lowianum* (*C. Lowianum* ♀ × *C. eburneum* ♂), and *C.* × *Winnianum* (*C. giganteum* ♀ × *C. eburneum* ♂), both being handsome free-growing plants, combining the characters of their respective parents.

R. A. Rolfe.

TRICHOPILIA SUAVIS LINDL.

A. Goossens pinx. P. De Pannemaeker chrom.

PL. CCCCXXIII.

TRICHOPILIA SUAVIS LINDL.

THE SWEET TRICHOPILIA.

TRICHOPILIA. Vide *Lindenia,* Engl. ed., vol. III, p. 43.

Trichopilia suavis. Pseudobulbi oblongi v. rotundato-oblongi, compressi, monophylli. Folia late oblonga, subacuta, coriacea, subsessilia. Scapi breves, horizontales v. penduli, 1-5 flori. Bracteae ovatae, subobtusae. Sepala subpatentia lineari-lanceolata, subacuta, undulata, carinata. Petala sepalis similia, paullo latiora. Labellum obscure trilobum, lobo intermedio transverse oblongo emarginato crenulato-undulato, lateralibus rotundatis crenulato-undulatis, disco laevi. Columna brevis, clinandrio lobulato tenuissime fimbriato.

Trichopilia suavis, LINDL. in PAXT. *Fl. Gard.,* I, pp. 44, 53, t. 11. — *Bot. Mag.,* t. 4654. — *Fl. des Serres,* t. 761. — LEM. *Jard. Fleur.,* III, t. 277. — *Revue Hort.,* 1859, pp. 220-222, fig. 56, 57. — RCHB. F. *Xen. Orch.,* II, p. 103. — WARN. *Sel. Orch.,* III, t. 8. — *Belg. Hort.,* XXIV, p. 89, t. 4 *(var. Lamarchae).* — PUYDT *Orch.,* p. 327, t. 44 *(var. Lamarchae).* — VEITCH *Man. Orch.,* IX, pp. 184, 185, cum xyl. — *Revue Hort.,* 1887, pp. 453, 434, fig. 91.

Var. alba, T. MOORE in WARN. & WILL. *Orchid Album,* I, t. 14. — *Lindenia,* I, t. 1. — *Reichenbachia,* ser. 1, I, p. 69, t. 31.

This beautiful Central American species, the third known in the genus, appeared in 1850, in the collection of R. S. HOLFORD, Esq., at Westonbirt, and about the same time in the collections of Mrs LAWRENCE, at Ealing, and of Messrs LODDIGES, at Hackney. The flowers were described as having the most delicate odour of hawthorn. Two years later it was figured in the *Botanical Magazine*, from a plant which flowered in the nursery of Mssrs LUCOMBE PINCE and C°.

Its habitat was rather vaguely recorded as Central America until 1874, when E. MORREN gave the following particulars in the *Belgique horticole* : —

" This charming flower was discovered in 1848, by WARSCEWICZ, in Costa Rica, on the Cordillera at an altitude of 5000-9000 feet. The finest specimens were met with on the volcano of Chiriqui, at an altitude of 8000 feet, where the thermometer ranges from 50° to 60° F.; some of the plants measureing two feet in circumference, and bearing from 40 to 80 flowers at a time. WARSCEWICZ sent the plants to Mr SKINNER, of London, remarking they grew on the trunks of oaks, species of *Trichilia*, and on *Cupania glabra*, at from 20 to 40 feet above the ground, but never lower down, and when the trees fall through age or any other circumstance, the *Trichopilias* soon languish and die. At Chiriqui, at this altitude, there is a dry season lasting from November till April, when there is neither rain nor dew, and the wind is often very violent, but throughout the remainder of the year both rains and dews are copious and frequent. "

It varies somewhat in the amount of spotting on the lip, and also in the

depth of colour, the most distinct form being the beautiful variety *alba*, which, like many other albinos, is very rare.

Trichopilia suavis may be grown in pots or in shallow hanging pans, the latter being preferable because it likes plenty of light and air. It succeeds well in the ordinary mixture of peat and sphagnum, with plenty of drainage. It succeeds well either in the intermediate or the Mexican house. Great care should be taken in watering, as anything like a sodden condition of the compost is fatal to their well-doing. If well grown, it is a very handsome plant and the fragrance and number of the flowers render it additionally attractive.

R. A. Rolfe.

ODONTOGLOSSUM CIRRHOSUM LINDL. var. SUPERBUM HORT.

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCCXXIV.

ODONTOGLOSSUM CIRRHOSUM LINDL. var. SUPERBUM HORT.

THE TENDRILLED ODONTOGLOSSUM, SUPERB VARIETY.

ODONTOGLOSSUM. Vide *Lindenia,* Engl. ed., vol. I, p. 19.

Odontoglossum cirrhosum. Pseudobulbi oblongo-lanceolati, compressi, ancipites, ecostati. Folia lineari-lanceolata, acuta, scapi folia superantes, paniculati, multiflori. Bracteae triangulo-lanceolatae, acutae. Sepala lanceolata, cirroso-acuminata, undulata. Petala sepalis similia, majora. Labellum unguiculatum, trilobum, lobis lateralibus brevibus rotundatis denticulatis recurvis, intermedio triangulo-lanceolato acuminato apice recurvo, disco bicornuto cornubus incurvis. Columna clavata, alis cirrosis.

Odontoglossum cirrhosum LINDL. *Gen. and Sp. Orch.*, p. 211. — LINDL. *Fol. Orch. Odont.*, p. 3. — RCHB. F. in WALP. *Ann.*, VI, p. 827. — RCHB. F. in *Gard. Chron.*, 1876, i, pp. 501, 503, fig. 91, 92; 1878, i, p. 181, fig. 33. — *Id.*, 1886, i, p. 12, fig. 3. — *Bot. Mag.*, t. 6317. — *Ill. Hort.*, XXV, p. 9, t. 301. — *Fl. Mag.*, n. s., 1876, t. 222. — WARN. & WILL. *Orchid Album,* IV, t. 151. — VEITCH *Man. Orch.*, I, p. 17, cum xyl. — *Orchidophile,* 1883, pp. 736, 737, cum xyl. — *Gartenflora,* XLI, p. 594, t. 1383. — *Bull. Soc. Tosc. Ort.*, 1890, p. 216, t. 9.

The elegant *Odontoglossum cirrhosum* was described by Dr LINDLEY as long ago as 1833, when only four other species were known, yet it was not introduced to cultivation until some forty years later. The original specimen was one collected by Colonel HALL in the valley of Mindo, in Guayaquil, at about 6000 feet altitude, and sent to Sir WILLIAM HOOKER. It was not until 1876 that it flowered for the first time in cultivation, and its introduction was due to the brothers KLABOCH, nephews of the famous collector ROEZL, who sent plants to Mr W. BULL, of Chelsea. It was exhibited for the first time at a meeting of the Royal Horticultural Society on April 5 th., 1876, by SPENCER BRUNTON, Esq., of Beckenham, and was unanimously awarded a First-class Certificate. About the same time it also flowered in the collection of Sir TREVOR LAWRENCE, Bart.; soon afterwards it became comparitively common in collections, and has ever since been highly esteemed on account of its graceful form and pleasing colours, and the ease with which it can be grown.

It is perhaps most allied to *C. naevium* LINDL., a beautiful species from the Santa Martha district, but is markedly different in the shape of the lip and length of the sepals and petals.

It is found on the Western Cordillera of the Ecuadorean Andes between the latitudes of 2°15 N. and 4° S. In certain localities it grows in company with *O. Hallii*, and it is from such spots that the beautiful natural hybrid *O.* × *elegans* comes, being evidently derived from the intercrossing of these two species by insect agency.

Some variation has been observed, both in the size of the flowers and the number, size and colour of the spots, and two varieties have received distinctive

names. The variety *Klabochorum* is a large form more heavily spotted with chestnut-brown than the type, while the one called *Hrubyanum* is nearly white, having very few traces of spots on the segments.

The specific name was given in allusion to the slender tendril-like column wings, and its correct spelling has been the subject of some discussion. LINDLEY originally spelt it "*cirrhosum*", to which exception has been taken on the ground that there is no "h" in the original Greek, though others argue that in the latinised form the addition of the "h" is necessary. Perhaps the best plan under the circumstances is to follow the original spelling, leaving the combatants to fight the matter out.

As regards culture there is really nothing to say except that it succeeds admirably under the cool treatment given to most other members of the genus.

The variety *superbum*, here figured, is a superior form, which has flowered each spring, since three years, in the houses of L'HORTICULTURE INTERNATIONALE, at Brussels.

R. A. ROLFE.

CYPRIPEDIUM × GIBEZIANUM L. LIND.

A. Goossens pinx. *P. De Pannemaeker chrom.*

PL. CCCCXXV.

CYPRIPEDIUM × GIBEZIANUM L. LIND.

MADAME E. GIBEZ'S CYPRIPEDIUM.

CYPRIPEDIUM. Vide *Lindenia*, Engl. ed., I, p. 31.
Cypripedium × *Gibezianum*. Novum hybridum e *Cypripediis villoso* et *venusto* artificiose productum.
Cypripedium × *Gibezianum* L. LIND., supra.

The name which this hybrid bears has already been given to several valuable plants, and is well known to all Orchidists. It is that of a noble lady of high qualities and inexhaustible charity, whose lamented death some months ago occasioned the most profound regrets to all who had the honour of her acquaintance, especially among the poor. It is also the name of a distinguished amateur who worthily continues the grand traditions left by Madame GIBEZ, and whose collections may be considered as one of the most charming and most select in France.

Cypripedium × *Gibezianum* was raised in the collection of Madame GIBEZ, of Sens, by crossing *C. venustum* with the pollen of *C. villosum*. It is well intermediate between the two parents, and we may remark in this connection that both of the parents have very marked characters, which always imprint themselves upon their descendants in a very decided way. Most of the hybrids derived from *C. villosum* bear so distinctly the marks of this parent that they may be recognised at first sight, and the same may be said of those derived from *C. Spicerianum*, *C. superbiens*, and also *C. venustum*. In the present hybrid the influence of the last named preponderates over that of *C. villosum*.

The flower has the petals very analogous with those of *C. villosum*, but a little shorter, less expanded at the summit and darker in colour; the upper half being of a bright mahogany brown, and the base clear yellow with some bright purple-brown spots. The dorsal sepal, which most resembles *C. venustum*, is pale yellow covered with green stripes, which are reddish on their inferior third, and purple brown near the median nerve. The lip, which is broad and long, and very massive, is of a clear brownish red, with the lower part greenish yellow, and the lateral lobes of a bright waxy yellow.

In short, this hybrid is of a very distinct and attractive character, and appears worthy to be comprised in the best collections.

REPOTTING AND MULTIPLICATION OF ANGRAECUMS, AERIDES AND VANDAS.

Plants of this class should generally be cultivated in pots or baskets, and the difference of these two methods should be well distinguished with respect to the frequency of repotting required.

Aerides and Saccolabium generally succeed well in baskets, especially the smaller species, such as *S. Hendersoni*, *S. miniatum*, *S. curvifolium*, *Aerides japonicum*, *A. multiflorum*, etc. The larger plants, however, should not be suspended from the roof, nor can the whole of the smaller ones be always suspended, because of the want of space in the upper part of the house. But whenever the plants require to be placed on the stages certain amateurs prefer pots to baskets, which are not generally so stable or so convenient.

With regard to plants of large size (and this is applicable to Vandas generally), it is advantageous to place them in baskets, because the compost will be better preserved, more aired, and the repotting more easy to effect.

The repotting of a plant six feet high, to which size Vandas frequently attain, would be a rather delicate operation if the plant were cultivated in a pot, and one demanding much care, and would require at least two men to support the plant, remove it from the receptacle and place it in a new one.

In a basket, on the other hand, the manipulation is easy. Without even removing the plant we cut the wires of the basket, add one or more rows of staves above, which are then refastened with galvanised iron wire, and the additional space filled with sphagnum moss. This operation suffices to hide the naked base of the stem, which is generally the object of repotting.

If the object is to renew the compost at the base, and the drainage, we unroll or cut the wire at the base, and detach one or two rows of staves, and pick out the drainage and the lower part of the compost, add fresh sphagnum and new drainage, and refasten the basket, after removing one or two rows of staves, so as to diminish the depth.

The inconvenience caused by the baskets having less stability is of little importance as these grand plants need never be removed, when once they have been placed in position on the tables; and cultivators can therefore arrange the baskets with greater care and thus give them the necessary stability.

With respect to Angraecums, which come from different regions, and require a rather more substantial compost, mixed with fibrous peat, we prefer to cultivate

(*To be continued on p.* 40.)

CATTLEYA TRIANAE LIND. et RCHB. F. var. CAPARTIANA L. LIND.

A. Goossens pinx. J. Goffart chrom.

PL. CCCCXXVI.

CATTLEYA TRIANAE LIND. et RCHB. F. var. CAPARTIANA L. LIND.

TRIANA'S CATTLEYA, Dr CAPART'S VARIETY.

CATTLEYA. Vide *Lindenia*, Engl. ed., I, p. 7.
Cattleya Trianae. Vide *Lindenia*, I, p. 63.
Var. Capartiana LIND. Vide supra.

This beautiful variety, remarkable for the size of its flowers and their dark colour, particularly at the tips of the petals, may be considered as one of the best forms of *Cattleya Trianae* (certain linguists think that it is more correct to say *Trianaei*), a species so rich in splendid forms. It flowered this year in the charming collection of Dr CAPART, after whom it is named.

I cannot give a better idea of the attractiveness of this collection than is furnished by the *Gardeners' Chronicle*, for April 21 last : —

" In the Rue d'Egmont, a busy but fashionable part of Brussels, near the Parc Leopold, is the veriest *bijou* of an Orchid collection, contained in an ornemental structure placed at the end of an ordinary town garden. Here the owner, the noted Dr CAPART, whose skill in the healing art has brought him such a large practice, finds his chief relaxation, which, he says, is not to be obtained anywhere as it is among plants by one who is fond of them. Very early morning finds the learned doctor among his Orchids, and usually the day closes with a visit to them. It is that constant and loving attention, paid them by one who has made a study of Nature, and of Nature's ways, both in the vegetable and the animal kingdom, a part of his daily life, which has brought about the excellent condition and vigorous health of all the plants in this small but rich collection of Orchids.

" The first house you enter is cool, and in it were found magnificent examples of *Odontoglossum crispum*, three of them being superb, and of different types, bearing flowers of large size and much substance on spikes some three feet in length. One had wax-like pure white flowers, very flatly arranged; another had equally fine flowers, but with crumpled petals, and the whole flower tinged with purple; and the third had spots of a rich reddish-brown tint. With these were other good varieties; and in bloom a fine violet-coloured *Odontoglossum Edwardii*, *Oncidium serratum*, *Ada aurantiaca* and diverse species; a fine *Masdevallia Veitchiana*, with other Masdevallias in bud.

" In the central division, which is furnished with a dome roof, were observed plants of a grandly-grown *Laelia purpurata*, as well as various Cattleyas, remar-

kable for vigour, and all well set with flower sheaths. In flower were good examples of *Coelogyne cristata* and *C. c. Lemoniana;* a noble plant of the fine white *Chysis bractescens*, some beautiful forms of *Lycaste Skinneri*, *Cattleya citrina*, *Odontoglossum citrosmum*, with many spikes, and several others.

" In the third division, the collection of Cypripediums, Phalaenopsis, Angraecums, Vandas, Dendrobiums, etc., were in fine condition, with some in bloom, among which we noted *Phalaenopsis Stuartiana*, *P. Schilleriana*, *Dendrobium nobile*, and a plant of *Aganisia cyanea*, with its large sky-blue flowers, which last, being a difficult plant to manage successfully, bespeaks the Doctor's skill in Orchid culture, for he manages the plants himself. "

(*Concluded from p.* 38.)

them in pots. Besides which these plants do not generally attain such a size as Vandas, and their repotting therefore does not present any difficulty.

*
* *

The propagation of caulescent Orchids, of which we now come to speak, may be effected very easily by sections of the stem. It is better, and more convenient, to select a piece furnished with roots. The section should be made a short distance below a root, and the cut part should then be dusted with a little powdered wood charcoal to make it heal. The piece should then be potted in the ordinary way, and be placed for some time in a shady spot. The plant thus deprived of its apex will soon grow again, by producing lateral growths.

The lateral growths which are produced from the base, or at various heights along the stem, may also be propagated in the same way.

Fragments of stem not furnished with roots may also be propagated, if potted and placed in a shady house, in a warm and very humid atmosphere. The cutting may also be placed under bell-glasses in a thick bed of sphagnum moss. The roots will appear later, and the plants may then be potted and placed under ordinary conditions.

G. Rivois.

MASDEVALLIA DAVISI RCHB. F.

PL. CCCCXXVII.

MASDEVALLIA DAVISII RCHB. F.

Mr. W. DAVIS'S MASDEVALLIA.

MASDEVALLIA. Vide *Lindenia*, Engl. ed., II, p. 17.

Masdevallia Davisi. Aff. *M. Harryanae.* Dense caespitosa; foliis cuneato-ligulatis obtuse acutis valde carnosis angustis; pedunculo longe exserto, cupula perigonii recta; sepalo superiori a triangulo basi in caudam longiorem extenso; sepalis lateralibus oblongis ultra medium connatis, lobis oblongis subito ac abrupte breve aristatis; tepalis ligulatis obtuse acutis, antice emarginatis ante unguem semi-sagittatis, bicarinatis; labello pandurato acuto, antice latiori, tricarinato, androclinii membrana serrata.

Masdevallia Davisi RCHB. F. in *Gard. Chron.*, II, p. 710. — ID., V, p. 366; *Xen. Orch.*, III, t. 203; *Bot. Mag.*, t. 6190.

Masdevallia Davisii occupies a very distinct place in the genus by reason of its colour, which is altogether unique and very attractive. It is the only pure yellow which exists among Masdevallias, and this tint is therefore as rare as in some other genera. It is this character which gives to *Cattleya citrina* its celebrity.

Masdevallia Davisii was discovered in 1873 by the collector DAVIS, of the firm of JAMES VEITCH & SONS, on the eastern Cordillera of Peru, a short distance from Cuzco.

He met with it on the sides of the mountains at a considerable altitude, from about 10,500 to 12,000 feet altitude, growing under conditions which BUNGEROTH has so well described in the *Journal des Orchidées* : —

" On the mountain sides covered with Sobralias of diverse tints, in the cool shady places, often watered by the crystal fluid from a small stream, are found among ferns, Adiantums, etc., large tufts of Masdevallia. The natives call them *banderitas* (little flags), because at a distance they appear like little standards, standing erect among the cool and beautiful foliage which surrounds them.

" The numerous species which this genus contains do not delight in full sun, or in a bright light. The majority of them are terrestrial, and grow among cool mosses and little ferns, generally along the margins of cool and rapid rivulets, in shady woods.

" A small number of species with beautiful flowers of medium size, are found in more elevated localities, in an argillaceous soil mixed with little stones, and exposed to more light, lastly a very few grow on the branches of an evergreen oak, *Quercus Humblotii*.

" Masdevallias, as has been said, are Orchids of an elevated region and

never descend to very low altitudes. They therefore require a temperature identical with that given to the majority of Odontoglossums, which they closely approach in other respects with regard to the districts in which they are collected. Their extremely dark and very brilliant tints, which the pencil of the artist is hardly able to reproduce faithfully, gives to most of them a particular interest, and it is rare to find in the elevated regions of the South American Cordillera a flower whose penetrating colour arrests the attention or excites the admiration as much as the Masdevallias....

Masdevallias, in conclusion, certainly deserve a place in all collections of choice Orchids, and increase notably their beauty and importance, by the infinite variations which they present, both in form and colour. "

LAELIO-CATTLEYA' × CAUWENBERGHEI L. LIND.

PL. CCCCXXVIII.

LAELIO-CATTLEYA × CAUWENBERGHEI L. LIND.

M. VAN CAUWENBERGHE'S LAELIO-CATTLEYA.

LAELIO-CATTLEYA. Vide *Lindenia*, Engl. ed., II, p. 25.
Laelio-cattleya × *Cauwenberghei* L. LIND., *supra*.

Recent importations, and especially those of the last two or three years, have revealed in certain Brazilian species which are already celebrated some further and very beautiful variations.

This has been particularly the case with *Laelia purpurata* and *L.* or *Laelio-cattleya* × *elegans*, which have revealed varieties so rich and numerous that the amateur is enbarrassed to know which to admire most.

Laelio-cattleya × *elegans* has undoubtedly caused hybridists to experiment with *Laelia purpurata*, one of the most splendid among Orchids with large flowers, and also one of those which best stamps its character upon its descendants. At the same time it serves to enhance the value of another less brilliant group, that of *Cattleya guttata*, whose characters are well apparent in certain forms of the natural hybrid of which we have spoken.

Laelio-cattleya × *Cauwenberghei* certainly belongs to the same group, but is distinguished by its size and clear colour, tinted with yellow, of the floral segments. Although its parents are not exactly known, we have little hesitation in assigning its origin to a cross between *Cattleya granulosa and Laelia purpurata*. It resembles the former species by the form and strong substance of its sepals and petals, their ground colour yellow lightly suffused with an olive tint, set off with purple dots, the breadth of the extremity of the petals and the light undulation of the margins, and lastly by the form of the front lobe of the lip, whose colour however is warmer and richer and its size larger.

As we have said above, we have not found a form approaching it among forms of *Laelio-cattleya* × *elegans*, whose limits are moreover somewhat uncertain. *L.-c.* × *elegans Nyleptha*, which flowered some yars ago, presents some of the same tendencies, if we may judge by the descriptions which have been given, but none, to our knowledge, has this ample form, this imposing and graceful colour.

L.-c. × *Cauwenberghei* flowered for the first time in the houses of L'HORTICULTURE INTERNATIONALE, Brussels, in 1893. It is dedicated to one of the foremen of this establishment, who has already completed twenty years of loyal service with us.

L. L.

COCHLIODA NÖTZLIANA

The *Gardeners' Chronicle*, in its number for May 26 last, publishes the following note respecting this Orchid : —

" Now that this beautiful novelty is getting better known in gardens, its real merits are becoming acknowledged. As with most species of Orchids, some varieties are considered to be better than others, although it cannot be said that there is a bad one among them. The plant being small in stature, and neat in habit, would be considered well furnished even if it bore much less conspicuous flowers than even the worst varieties give. The best variety that we have seen is kindly forwarded to us by W. C. Clark, Esq., Orleans House, Sefton Park, Liverpool. It is a graceful, six-flowered spray, each flower 1 3/4 inch broad, in colour brilliant vermillon overlaying orange. The crest of the lip is bright yellow, and the apez of the column rose-coloured. The plant requires to be grown near the glass of the roof, like *Sophronitis grandiflora*, but slightly warmer, and with abundance of water. "

We may add that when this plant is well cultivated it produces long inflorescences carrying a large number of flowers, of very remarkable decorative effect. A connoisseur who recently visited the collection of M. Dallemagne, of Rambouillet, tells us that among the plants most admired in this beautiful collection was a superb specimen of *Cochlioda Nötzliana* covered with groups of very large flowers. The bright colour of this species is particularly splendid under artificial light, as it then gives silken reflections of incomparable brilliance. *Cochlioda Nötzliana* is also very useful for cut flowers.

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PART XLII. JULY 1894.

LINDENIA

ICONOGRAPHY

OF ORCHIDS

CONDUCTED BY

J. LINDEN, LUCIEN LINDEN and EM. RODIGAS.

THE COLOURED PORTRAITS BY

P. DE PANNEMAEKER, A. GOOSSENS and J. GOFFART.

CONTENTS :

	Pages
Odontoglossum crispum Lindl. var. ocellatum Hort.	45
Odontoglossum cordatum Lindl. var. aureum Hort.	47
Cypripedium Godefroyae Godefr. var. leucochilum Hort.	49
Odontoglossum Pescatorei Lind. var. Chaberiae Lind.	51

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ODONTOGLOSSUM CRISPUM LINDL. var. OCELLATUM HORT.

A. Goossens pinx. *J. Goffart chrom.*

PL. CDXXIX.

ODONTOGLOSSUM CRISPUM LINDL. var. OCELLATUM HORT.

THE CRISPED ODONTOGLOSSUM, VARIETY WITH SMALL ROUND SPOTS.

ODONTOGLOSSUM. Vide *Lindenia*, I, p. 11.
Odontoglossum crispum. Vide *Lindenia*, I, p. 101.
Var. ocellatum HORT., supra.

The *Lindenia* has already figured several varieties of *Odontoglossum crispum*, a magnificent species so rich in superb forms and marvellous colours. But it appears that the number is inexhaustible, and we have to-day the opportunity to reproduce a new and very distinct form, which is clearly distinguished from the majority of known varieties.

In this the spots, instead of being large and more or less grouped and agglomerated in the centre, are very small, round, and arranged along the margins, somewhat as in some of the brightest forms of *O.* × *Ruckerianum;* underneath as in that one; lastly the spots are bright red, not brown, as in the case of most of the varieties of *O. crispum*.

This beautiful variety made its appearance at the end of 1893 in the collection of W. THOMPSON, Esq., of Walton Grange, Stone, a collection which we know is particularly rich in the rarest and most splendid Odontoglossums.

L. L.

SPOTS ON THE LEAVES OF ORCHIDS.

The black spots which sometimes appear on the leaves of Orchids, and which spoil their appearance, are generally produced by fungi, which fix themselves on the leaves, and are there developed as parasites, at the expense of the cellular tissue, which they gradually destroy.

These fungi belong chiefly to the genera *Calospora, Dactylaria, Glaeosporium, Cladosporium*, *Hypodermium* and *Sphaerella*.

Their determination is difficult, and requires not only a thorough knowledge of subject, but also long and often very delicate researches, and sometimes special cultivation.

When the fungi are separately established on a leaf, it is easy to determine if it is a type already known, and if by chance it is not, to ascertain quickly its characters, and to assign to it its proper place in the system of classification. At the same time it is possible

to isolate them to study the conditions under which they live, their development and the extent of their ravages, and thus, by knowing their habits, to know at the same time their subsequent occurence, and to prevent their multiplication.

It is, however, rare for these Cryptogams to occur isolated. There exist, moreover, a certain number of forms which inhabit our houses, and are found together on the same leaves, frequently with others growing upon them.

When the parasitic fungi have penetrated the surface and attacked the substance of the leaf, the saprophytes which live upon the products of decomposition introduce themselves, whereupon the destruction of the leaf progresses rapidly, and the microscope can neither furnish precise indication of the nature of the disease, nor of its origin, the fungi being so much mixed up with other vegetation.

It sometimes happens, indeed, as in the case of the fungus which sometimes attacks the Vanilla in the Seychelle islands, *Calospora Vanillae,* that the same fungus undergoes successive transformations as the disease spreads over the leaf. Thus the species in question, *C. Vanillae,* had already received three different names before the common origin of its three forms was known.

Supposing, indeed, that we are able to isolate and determine the different fungi present it is impossible, without knowing thoroughly the life history of each, either to say which form commenced the attack, and opened the way for the others, or what would be useful to check the spread of the disease. With four, five, or even ten different fungi present, how can we determine the parts played by each in the mischief? In such cases one must proceed to cultivate the species separately, and submit them to prolonged observation. One learns thus their nature and habits. Afterwards, if traces of analogous wounds are found on the leaves, their origin can immediately be determined.

Thus we see how much research is necessary to obtain a definite result on such a subject. It is much to be desired that amateurs should facilitate these researches by sending materials, namely the diseased leaves which they find in their houses, to the laboratories established for this purpose, especially to the one which the Botanical Society of Brussels has recently established.

It is very important to cut the leaves a soon as the disease appears, and not when it is too far advanced to enable one to determine the origin.

Sometimes, indeed, when the damage is first observed, the fungus itself, which has caused it has already disappeared, having accomplished its work. This is the case, for example, with the potato disease. The fungus dies after having destroyed the substance of the leaf, and when these become black the mischief is already done, beyond all possible remedy. The only things which we can then discover with the microscope are the various saprophytes which have succeeded the original parasite, now only represented by spores.

*
* *

We may now speak of the methods of combatting the fungi.

These parasites generally develop when the houses are kept too hot or too cold, especially when the air is too close, and too much charged with stagnant humidity. In order to expel the fungi, we should therefore ventilate the houses as much as possible, and keep the temperature within proper limits, and observe generally all the precautions which tend to produce healthy growth.

On the other hand, as we cannot entirely prevent the introduction of the fungi into our houses, we must examine the leaves from time to time, and wash them with weak tobacco

(To be continued on p. 48.)

ODONTOGLOSSUM CORDATUM LINDL. var. AUREUM HORT.

PL. CDXXX.

ODONTOGLOSSUM CORDATUM LINDL. var. AUREUM HORT.

THE CORDATE ODONTOGLOSSUM, YELLOW VARIETY.

ODONTOGLOSSUM. Vide *Lindenia*, I, p. 11.

Odontoglossum cordatum. Pseudobulbis oblongis compressis diphyllis; foliis late-oblongis planis acutis scapo squamis carinatis vaginato brevioribus; racemo stricto disticho; bracteis navicularibus acuminatis membranaceis; sepalis petalisque lineari-lanceolatis acuminatissimis; labello cordato acuminatissimo, integerrimo, appendice unguis carnosa apice biloba basi utrinque dente unico aucto, columna pubescente clava subaptera.

Odontoglossum cordatum LINDL. in *Bot. Reg.*, 1838, Misc. 90, et 1845 Misc. 60, nº 33. — KNOWL et WESTC., *Flor. Cab.*, t. 100. — PAXTON *Mag. of Bot,*, XIII, p. 147. — LINDEN *Pescatorea*, t. 26. — BATEM. *Monogr. Od.*, t. 25. — *Gartenfl.*, t. 356. — WILLIAMS *Orch. Alb.*, IV, t. 186.

Var. aureum HORT., WILLIAMS *Orch. Alb.*, XI, t. 489.

Odontoglossum cordatum is one of the most ancient species in the genus. It was originally introduced by Mr GEORGE BARKER, of Birmingham, and flowered for the first time in his collection in 1838, though it soon afterwards disappeared from cultivation, in the same way as many other cool Orchids, because at this epoch their proper treatment was not understood. It was not until 1854 that is was definitely re-introduced into cultivation, by M. J. LINDEN, and became dispersed among various collections.

As was remarked by the author of *Pescatorea*, in describing *O. cordatum*, this species is very nearly allied of *O. maculatum*, whose history is pretty nearly the same, for it also was introduced by Mr GEORGE BARKER, of Birmingham, was soon lost to cultivation, and was re-introduced by M. LINDEN.

O. cordatum, however, is distinguished from *O. maculatum*, by its habit, its more elongated and narrower sepals and petals, and the more acuminate shape and different colour of its lip.

The typical form has the sepals reddish-brown, tinted with yellow at their points, and ornamented with two or three transverse yellow lines at the base; the petals pale yellow releived with large brownish red spots, and suffused with brown at the tips, and the lip white or yellowish spotted with brown at the point and along the median line from the base.

The variety *aureum* is distinguished by its pale colour, which is almost wholly sulphur yellow, on which the spots of the type are but very feebly represented, with a pale olive tint. It is therefore a sort of albino, analogous with the form of *Odontoglossum Insleayi* which was figured in this work under the name of variety *Imschootianum*, and the form of *O. Schlieperianum* which is cultivated as variety *xanthinum*.

O. cordatum is a native of Central America, in the middle of Mexico and the northern parts of Guatemala. It is therefore a species which requires rather less air and slightly more warmth than the Columbian Odontoglossums.

L. L.

(*Concluded from p.* 46.)

water. Those which we find attacked should be washed with a dilute solution of sulphate of copper, which is a better remedy in such cases. Lastly, those which are badly diseased and on which the black spots have destroyed the surface should be cut off and burnt, to prevent the reproduction of the fungi.

One should take care not to shake the leaves in cutting them, and to carry them wrapped in paper, so that the spores may not become detached, and so infect the other plants and propagate the disease.

Lastly one should avoid leaving dead leaves or other decomposing vegetable refuge on or under the stages, as this constitutes a very dangerous source of infection. Thus we see that cleanliness is of the utmost importance.

Comte DE MORAN.

(*Journal des Orchidées,* vol. V.)

CYPRIPEDIUM GODEFROYAE GODEFR. var. LEUCOCHILUM HORT.

PL. CDXXXI.

CYPRIPEDIUM GODEFROYAE GODEFR. var. LEUCOCHILUM HORT.

Mme GODEFROY'S CYPRIPEDIUM, WHITE LIPPED VARIETY.

CYPRIPEDIUM. Vide *Lindenia*, I, p. 17.

Cypripedium Godefroyae GODEF., in *Orchidoph.*, t. 830. — *Flor. and Pom.*, 1884, p. 37. — *The Garden*, XXVII, t. 492. — WILLIAMS *Orch. Alb.*, IV, t. 177. — *Bot. Mag.*, t. 6876. — *Gard. Chron.*, XXIII, p. 49, cum ic. xyl. — VEITCH, *Man. of Orchid. Pl.*, IV, p. 27.

Var. leucochilum HORT., *Gard. Chron.*, XV (1894), p. 717; *Id.*, p. 815, cum ic. xyl.

Cypripedium Godefroyae is a species at once very interesting and very beautiful, belonging to a small section which is very distinct in habit and colouring, and comprises also *C. bellatulum*, *C. concolor* and *C. niveum*.

It was discovered about the year 1876 by an Englishman named MURTON, who sold to M. GODEFROY, a nurseryman of Argenteuil, the plants which he had collected, but M. MURTON died before the plants were sent home, and they were left to the care of another Englishman named ALABASTER, who sent the first introductions of this species to M. GODEFROY and to the Royal Gardens, Kew. The first flower was produced at the end of 1884, in the collections of Baron ROTHSCHILD, at Ferrières and M. LEE, of Leatherhead.

C. Godefroyae was originally found on a little rocky island, situated near the island of Champon, in the northern part of the Malayan gulf. It appears, according to the *Garden*, that it grows only on the western part of the island, that is the one facing the Malay peninsula, and never towards the east. Some of the plants were collected at only about 15 feet above the level of the sea, whence it ranged up to about 80 feet altitude. In this situation the plants are in the shade up to about 10 o'clock in the morning, and afterwards exposed to the direct rays of the tropical sun during the rest of the day.

C. Godefroyae is rather variable, and in this respect establishes a certain transition towards other species of the group to which it belongs. Some of its varieties approach rather near to *C. bellatulum*, still they generally differ in the shape of the floral segments, especially of the petals, which have the margins undulate, and the apex emarginate. In the foliage, moreover, it is clearly distinguished from this species. In habit it is nearly identical with *C. niveum*, in fact it is difficult to distinguish between the two plants though the two flowers are very different.

C. Godefroyae is in colour very analogous with *C. bellatulum*, with the sepals

and petals of a cream white, covered with large purple-brown spots, more numerous towards the base, and disposed more or less in lines parallel with the median nerve.

The variety *leucochilum*, which is figured in the annexed plate, made its appearance in the month of June, in the collection of R. J. Measures, Esq., of Camberwell, and is very distinct and remarkable. M. Measures' flower, of which the *Gardeners' Chronicle* published, in its number of June 30 last, a beautiful woodcut, bears a general resemblance to *C. bellatulum*, and demonstrates, as the *Gardeners' Chronicle* remarks, that the line of demarcation which separates certain extreme forms of the two species is very fine. The present one, however, possesses the peculiarity, which has given the name to the variety, of having the front of the lip entirely cream white, without any spots except on the inside of the lip and the staminode, which bear a large number of minute purple spots.

M. Measures' flower presents also another peculiarity which is not present in our example, in having the apex of the lip prolonged into a little point. The peculiarity is pretty constant in this plant, it appears, but others of the same importation have not produced it.

The plant which served for our model flowered recently in the collection of M. Houzeau de Lehaie, of Mons, a member of the Belgian Chamber of Representatives. It was exhibited at the Horticultural Exhibition at Mons, where it excited very great interest.

L. L.

ODONTOGLOSSUM PESCATOREI LIND. var. CHABERIAE LIND.

Goossens pinx. *P. De Pannemaeker chrom.*

PL. CDXXXII.

ODONTOGLOSSUM PESCATOREI LIND. var. CHABERIAE LIND.

PESCATORE'S ODONTOGLOSSUM, Mme CHABER'S VARIETY.

ODONTOGLOSSUM. Vide *Lindenia*, I, p. 11.
Odontoglossum Pescatorei. Vide *Lindenia*, IV, p. 71.
Var. Chaberiae. Varietas labello pulcherrime purpureo.

This is a superb variety of one of the oldest and most celebrated species. *Odontoglossum Pescatorei* is one of the kings of the cool house, and the rival of *O. crispum*, which it equals as regards its floriferousness. But it does not produce so many varieties, and its colour is more regular.

The *Lindenia* has already published two very remarkable forms of this species, one entirely suffused with rose, and of exceptional size, the other richly spotted with reddish purple on all the segments.

The variety figured in the annexed plate is only spotted on the lip, the sepals and petals being entirely pure white. But the lip presents a colour of incomparable richness, both on the lateral lobes and on the front one; the purple lines and spots are so numerous and so large that the white ground almost completely disappears. The contrast between this organ and the rest of the flower is one of great beauty.

This superb variety flowered in the collection of an ardent and discriminating amateur, M. A. CHABER, to whose mother we are pleased to dedicate it. The collection of this amateur has been selected with extreme care, only the most remarkable and most celebrated species being represented, and often by choice varieties of great rarity. The *Lindenia* might assuredly have the opportunity of publishing a series of marvels, difficult to meet with elsewhere in cultivation, from examples in the collection of M. CHABER, if the modesty of this distinguished amateur were not opposed to such publicity.

We do not here refer to the history of *O. Pescatorei*, which has already been written; it is pretty well known that this famous species was introduced in 1847 by M. J. LINDEN, and flowered for the first time in 1851.

We are glad to be able to conclude the seventh volume of this work by such a beautiful variety of an eminently popular Orchid.

L. L.

BIBLIOGRAPHY.

LE LIVRE DES ORCHIDÉES. — By Comte Oswald de Kerchove de Denterghem. A very interesting volume of six hundred pages in which a large number of facts are collected together and very well arranged. The author, however, has unfortunately fallen into a number of serious errors.

*
* *

THE ORCHID GROWER'S MANUAL, the excellent treatise by Mr Williams, has reached its seventh edition, much improved and handsomely got up. It is written by a connoisseur of Orchids.

L. L.

INDEX OF CONTENTS.

PART VII.

PLATES		PAGES
421	Cattleya Aclandiae Lindl. var. tigrina Hort.	29
409	Cattleya Eldorado Lind. var. Lindeni Hort.	5
409	Cattleya Eldorado Lind. var. Oweni Lind.	5
425	Cattleya Trianae Lind. var. Capartiana Lind.	37
422	Cymbidium eburneum Lindl.	31
411	Cypripedium Dallemagnei Hort.	9
428	Cypripedium × Gibezianum Lind.	43
414	Cypripedium insigne Wallich var. montanum Hort.	15
432	Cypripedium Godefroyae Godefr. var. leucochilum Hort.	49
419	Dendrobium Wardianum Warn. var. Lindeniae Hort.	25
415	Laelia × juvenilis Bleu.	17
426	Laelio Cattleya × Cauwenberghei Lind.	39
413	Laelio-Cattleya × elegans Rolfe var. leucotata Hort.	13
410	Lycaste × Imschootiana Lind.	7
412	Lycaste Luciani Van Imsch. et Cogn.	11
427	Masdevallia Davisi	41
417	Maxillaria mirabilis Cogn.	21
424	Odontoglossum cirrhosum Lindl.	35
429	Odontoglossum cordatum Lindl. var. aureum Hort.	47
420	Odontoglossum crispum Lindl. var. Dallemagneae Lind.	27
430	Odontoglossum crispum Lindl. var. ocellatum Hort.	45
416	Odontoglossum crispum Lindl. var. Waltonense Lind.	19
431	Odontoglossum Pescatorei Lind. var. Chaberiae Lind.	51
423	Trichopilia suavis Lindl.	33
418	Zygopetolum intermedium Lodd. var. peruvianum Rolfe	23

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Cattleya Aclandiae var. tigrina, Cattleya Eldorado var. Lindeni, Cattleya Eldorado var. Oweni, Cattleya Trianae var. Caparti, Cymbidium eburneum, Cypripedium × Dallemagnei, Cypripedium × Gibezianum, Cypripedium Godefroyae var. leucochilum, Cypripedium insigne var. montanum, Dendrobium Wardianum var. Lindeniae, Laelia × juvenilis, Laelio-Cattleya × Cauwenberghei, Laelio-Cattleya × elegans var. leucotata, Lycaste × Imschootiana, Lycaste Luciani, Masdevallia Davisi, Maxillaria mirabilis, Odontoglossum cirrhosum, Odontoglossum cordatum var. aureum, Odontoglossum crispum var. Dallemagneae, Odontoglossum crispum var. ocellatum, Odontoglossum crispum var. Waltonense, Odontoglossum Pescatorei var. Chaberiae, Trichopilia suavis, Zygopetalum intermedium var. peruvianum.